The Industrial and Commercial Schools of the United States and Germany

Frederick William Roman

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The Industrial
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United States and Germany

A Comparative Study

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By

Frederick William Roman
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TO

MY TEACHER AND FRIEND

JOHN WILLIAM WITHERS

PREFACE

THE conception of this work dates from the autumn of 1907, when the author was a member of the faculty of the State Normal School, Bowling Green, Ky. At that time, the author received a commission from Governor Beckham of the Commonwealth of Kentucky, "to investigate and report on the German School System to the State Superintendent of Public Instruction."

The study and investigation covered a period of two and one-half years.

Besides visiting the schools in all of the leading German States, the author enjoyed the exceptional privilege of pursuing a regular course on the purposes and methods of the continuation schools of Prussia, which course was given in the summer of 1909 in Berlin by Dr. Kühne of the Prussian Ministry of Commerce and Industry.

The results of this investigation were first published in Germany in October, 1910, under the title, *Die deutschen gewerblichen und kaufmännischen Fortbildungs- und Fachschulen und die industriellen und kommerziellen Schulen in den Vereinigten Staaten, Ein Vergleich* (Leipzig). This work has been used as the basis of the present volume, though certain material additions have been made since the original issue.

For the successful completion of his undertaking, the author is greatly indebted to many educators and officials in both Germany and the United States. He wishes to take this occasion to express his deep gratitude to the Baroness Elly von Rössing, who by virtue of her long connection with the celebrated Victoria Fortbildungs- und Fachschule of Berlin, was able to give most valuable assistance and counsel.

Vocational education has made great strides since the appearance of the German edition. To Professor Frank M. Leavitt of the University of Chicago the author is largely indebted for information on recent progress and the present status of vocational education in the United States.

In Chapter XIX. has been incorporated much of the material that the author contributed to the issues for February and June, 1913, of the *Elementary School Teacher.*

The author is under many obligations to Mrs. Kathryne Handforth, who was formerly associated with the Massachusetts State Board of Education, for valuable suggestions affecting the arrangement of the manuscript and for the reading of the same.

F. W. R.

SYRACUSE, NEW YORK,
September, 1914.

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The Industrial and Commercial Schools of the United States and Germany

I

THE CHARACTER, QUANTITY, AND QUALITY OF THE LITERARY EDUCATION IN THE UNITED STATES AND GERMANY AS A BASIS FOR INDUSTRIAL AND COMMERCIAL TRAINING

GENERAL education is fundamental to industrial and commercial education. The former holds the same relation to the latter as does the soil to the harvest. Upon the plan, quantity, quality, and ideal of the first, the second must necessarily be constructed. One deals with books; the other with life. One concerns itself with principles and theory; the other with practice and application. Each is the complement of the other.

We know well that the educational institutions of a people are reflections of its culture, civilization, and ideals. Germany has its own unique

school type, which is the product of the environment and historic achievements of Central Europe for more than a thousand years, while that of the United States is the product of a combination of the culture of half a dozen European nationalities. It is very easy to realize that such a collection of forces and influences, transplanted to a new world, and under different geographic, climatic, economical, and sociological conditions would produce a school system entirely unlike anything found in the Old World.

To contrast and compare the industrial and commercial schools of the two countries, therefore, we must first outline the training that has preceded. As one government is a monarchy and the other a republic, the respective school systems are made to articulate in the scheme of government. The goal set for the child just entering school, the management of the sexes, and the great social, economic, and religious differences—all contribute to a material difference in the German and American school systems. Children trained under such diverging conditions will necessarily be in an entirely different frame of mind by the time they reach their fourteenth year, the age at which the greater part of those who take up industrial or commercial training begin their vocational studies.

Hence, before taking up the main subject, we shall trace the chief characteristics of German and American schools with special reference to the preparation that the children secure for industrial

and commercial work. A detailed description of the public schools of the two countries cannot be given, and not even a complete criticism will be offered here. Yet there are certain underlying facts, ideals, and conditions so insistently obvious in both countries that a comparison of schools is impossible without due recognition of these features. To decide the advantage or disadvantage they exercise upon the industrial and commercial courses succeeding the public school course, and the influence they have upon the economic and social power of the nation is in certain respects an easy task, while in others the decision must be left to personal opinion.

1. **The Public Schools in Germany.** At the base of the whole gigantic German school system lie the "public schools," which were attended in 1900 by 8.9 millions or 90.8 per cent. of all the children between the ages of six and fourteen years.[1] The remaining 9.2 per cent. attended middle, higher, and private schools.

The middle and higher schools are not consecutive classes,[2] but are parallel with the public schools. They are established in large cities only. A tuition fee is required, and the chief distinction is a division based on money and social position.

[1] Lexis, *Das Unterrichtswesen im Deutschen Reich*, vol. iii., p. 57.

[2] Tuition is free in the public schools of Prussia, while in the middle schools tuition is charged. In Saxony, on the other hand, tuition is charged in the public schools except in special cases of poverty.

Their curricula are arranged somewhat with a view toward a more direct preparation for the higher institutions. School attendance for all children between the ages of six or seven and fourteen years is compulsory, and the law is strictly enforced.

(*a*) *Length of School Year, Number of School Hours a Week.* The number of school weeks in the year, the number of hours for each grade, and the subjects pursued by the various grades vary slightly in the different states; also there are some differences in these respects to be noted even in the same state when a comparison is made between the city and the village schools. School is in session forty to forty-two weeks in the year, and the number of school hours in the week ranges from twenty to twenty-two in the lower grades and averages about thirty in the upper grades.

(*b*) *Separate Instruction of the Sexes.* As a rule the sexes are taught separately. However, in communities where the Catholic and Protestant religions are both represented, it is thought more important to separate the children on the basis of religious affiliation, even if by so doing it becomes necessary to establish co-educational schools because of the small number in attendance.[1]

(*c*) *Course of Study.* According to Lexis (vol. iv.) the hours spent each week on the various

[1] Lexis, *Das Volkschulwesen und das Lehrerbildungswesen*, vol. iii., p. 109.

subjects and in the different grades are as follows:

	LOWER GRADES		MIDDLE GRADES		UPPER GRADES	
	Schools with one teacher	Schools with more than one teacher	Schools with one teacher	Schools with more than one teacher	Schools with one teacher	Schools with more than one teacher
Religion	4	4	5–6	4	5–6	4
German	11	11	10–9	8	8–7	8
Arithmetic	4	4	4	4	5	6
Drawing	—	—	1	2	2	2
Nature Study	—	—	6	6	6	6 (8)
Singing	1	1	1	2	2	2
Gymnasium } Handwork }	—	2	2	2	2	2
	20	22	30	28	30	30 (32)

The above table does not take into account the recent introduction of instruction in cooking for girls. Such instruction was given in the last grade[1] in 161 cities during the year 1910, the average time devoted to such classes being four hours a week.

According to the statistics in 1901 there were in Prussia:

	Mixed Classes	Boys' Classes	Girls' Classes
In the cities	9,337	1,341	13,255
In the country	60,385	3,969	3,995

[1] In many cities girls have instruction in cooking during the last three grades.

In Bavaria there were in the school year 1889–1900:

6,318	Mixed Schools
115	Partly Mixed Schools
457	Boys' Schools
463	Girls' Schools

In the boys' schools there is a tendency to introduce increasingly the so-called manual training. In the city of Mannheim 40 per cent. of all the pupils that are entitled to such instruction have availed themselves of the opportunity. Two municipal schools in Berlin have introduced manual training since 1909. Kerschensteiner's workshops in Munich are deservedly famous throughout Germany, and it appears as if all other German cities will gradually follow this example.

(*d*) *Instruction after the Completion of the Public School Course.* After the public-school course has been completed, practically all the boys and girls seek some kind of employment which will enable them to become as nearly self-supporting as possible. They still enjoy certain educational advantages in the continuation schools, which, if one except those resident in certain less densely settled land districts, are accessible to all. In this way education is prolonged two or three years.[1]

(*e*) *Preparation of the Teachers.* In the elementary and middle schools, both public and private, we find teachers of practically equal qualifications,

[1] In some cities an attempt has been made to extend the continuation school period to cover four years.

all of whom have had at least six years of special training in what would correspond to our normal schools.[1]

(*f*) *Higher Schools.* The higher schools for boys are either *humanistische Gymnasien*, *Realgymnasien*, or *realschulen*, according to whether Greek and Latin, or only Latin, or neither Greek nor Latin but modern languages are taught. These schools have either six- or nine-year courses, and the pupils are received from a three-year preparatory school or from a private school. Aside from this, a certain percentage of the enrollment leaves the public school after four years in order to enter the higher school.

In the smaller cities we find the *Progymnasien* or *Realprogymnasien*. These institutions consist of five grades, and pupils are prepared to enter the first grade after the third or fourth year's attendance at public school.

Whether a child can attend a higher school

[1] In Bavaria and Wurttemberg, the teachers have but five years' training, but an effort is on foot which will eventually add an additional year. Then, too, the women teachers, who form $17\frac{1}{2}\%$ of the whole teaching force in Germany have not, as a rule, had a full six-year seminary training, inasmuch as their previous preparation was secured in a *hohere Töchterschule*, which has higher courses than the public school. In consequence, one notices that, on the average, the women teachers come from more affluent families than the men. But the tendency in this direction, too, is to make the preparation of the women uniform with that of the men. Seminars with six-year courses for girls who have just completed the public school course, are gradually superseding the older forms.

depends largely upon the wealth and social position of the family. The particular division to which he is sent depends upon the ambitions of the parents, capabilities of the child, and the financial ability of the parents to pay for a longer or a shorter course.

In Prussia a new law was passed in April, 1909, affecting the higher schools for girls, which provided a uniform entrance requirement and made possible a large degree of elective work in the later years. After completing the lower grades and part of the middle grades a girl can enter a *humanistisches*, a *Realgymnasien*, or a *Realschule* (patterned after the boys'school), or she may complete a ten-grade higher school for girls, which will prepare her to enter a teachers' seminar (with four-year course) or a school for women (*Frauenschule*), a sort of higher continuation institution.

2. Public Schools in the United States. (*a*) *Organization.* The whole school system in the United States lacks the uniformity of that of Germany. But in general one may say that the public-school system resolves itself into two divisions; the rural-school system and the city schools.

In the country the child usually enters school at the age of six, and no maximum age is fixed debarring from further school attendance. For that reason it is not seldom that one finds pupils in the rural schools who have reached their twenty-first year. The majority of rural schools are not

graded throughout; therefore, a pupil may be in several grades at the same time, according to his degree of proficiency in the several subjects taught. The graded schools have an eight-year course, which prepares the pupil for entrance to a high school of a neighboring city or to the county high school.

The city schools have a regular eight- or nine-year course, called grammar school. Entrance to the grammar school is sometimes preceded by attendance at a kindergarten, which is not always connected, however, with the public schools. After a pupil has completed the grammar school, he is prepared to enter high school, which extends over a period of four years. In the larger cities a certain percentage of the pupils attend private grammar schools and private high schools, but the enrollment in these private schools is steadily declining as compared with the enrollment in the public schools.[1]

(*b*) *School Attendance Laws.* In 1906, thirty-seven of the forty-six States of the Union had a law establishing compulsory attendance upon public schools. At that time twenty-one States required school attendance after the eighth year of age, and sixteen after the seventh year of age.

The duration of compulsory school attendance varied in the several States. Maryland had the shortest, a period of four years; Connecticut and

[1] In the year 1905 the attendance at public high schools was 722,692, and upon private high schools 101,753.

Illinois the longest, extending for over a period of nine years. In 1910, ten States required school attendance six years; twelve States, seven years; and eleven States, eight years.[1]

The number of months during which school is in session varies from two to ten.

(*c*) *Enforcement of School Attendance Laws.* But in many States this law is not strictly enforced.[2]

[1] 1906 *Report of Commissioner of Education*, vol. ii., p. 1271; "Unfortunately, the actual average period of school attendance in our country falls far below its legal measure. From estimates continued for several years in the Bureau of Education it appears that the average number of years of schooling in elementary and secondary schools supported by public taxes is equivalent to 4.69 years of 200 days for each individual of the population. In the South Atlantic division it falls to 3.25 years of 200 days each, and in the South Central division to 2.91 years.

"If this average degree of schooling were the actual experience of every child, it might, indeed, suffice to keep down illiteracy which still threatens us from the colored population of the South, from the native white population in regions poorly supplied with schools, and from foreign-born white laborers coming into the States most highly favored with schools and colleges. But this average, as we know, conceals a much lower degree of school attendance for a large proportion of the poorer children."

[2] A superintendent of one of the large school systems in Kentucky told me personally that he had attempted to have the compulsory attendance law enforced, but he was requested by the board of education not to carry out the law as it would bring more children into school than the buildings could accommodate, and that the city had, under existing conditions, enough expense in affording instruction for those that attended voluntarily. A prominent school president from Mississippi wrote to me recently that it would be impossible to pass a compulsory attendance law in his State, and that such law could not be enforced if it were passed. A short extract from the State Superintendent's report for the State of Kentucky shows clearly the laxity in the enforce-

Considering all young people between the ages of five and eighteen years as the gross school population, in 1906 we find 16,641,970 pupils of *all* ages enrolled in common schools. This is 70.43 per

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ment of the laws for compulsory school attendance and gives a picture of school conditions prevailing in the whole State. Supt. Crabbe says: "The State, with commendable liberality, has been expending two millions or two and a half millions of money annually for teachers, yet the results show: That no schoolhouses were building except in rare cases. That the so-called buildings were without furniture and equipment. That there were no libraries. That more than half the children of school age never went to school at all, and that half of those enrolled in school were so irregular in attendance as to render their schooling nil. That eight-ninths of the teachers were untrained. That there was practically no supervision, and that in general, the schools and the quality of the schooling have not become better and their product has not been satisfactory. What's the trouble? The trouble is that the people of the school districts have been pauperized by reason of this big sum of money given by the State and the local community has failed to raise a single dollar for its own schools."

Another excellent illustration of the laxity of enforcement of the law may be cited. Kentucky law requires that children in the country attend eight weeks, and in the cities the full term, and also fixed, on the parent, a penalty of $5 to $20 for failure to obey the law. All children come under this law until they are fourteen years of age, unless they have completed the eight grades of the elementary school. Since 1902, Kentucky has also had a child-labor law. Both laws make it possible for the superintendent to get the children into school. Yet with what laxity these laws are enforced is shown by the careful statistics compiled by Annie A. Halleck, who reports in the *Courier Journal* for January 27, 1908, that there were in Louisville in 1908, 30,064 children between the ages of seven and fourteen. On this number only 25,293 were enrolled in school. This shows that there were 4,771 children in Louisville of an age requiring their attendance at school, who were enrolled in no kind of school

cent. of the total. During that year, 1905–06, the average daily attendance of those enrolled was 70.38 per cent., and the average length of the school term was 151 days. Therefore, the average number of days attended by each pupil actually enrolled was 106.[1] and the average number of days' schooling for every child from five to eighteen years of age in 1905–06 was only 74.1 days.

In 1905–06, in cities containing a population of 8000 or more, 18.4 per cent. of the grammar school pupils attended private schools and the daily average of attendance of this group is, therefore, unknown, but the average attendance for those in the public school was 77.7 per cent. of the enrollment. The average length of the school term was 185.9 days, and the average number of days attended by each pupil was 144.5.[2] In all villages below 4000 population and in the country districts there were enrolled out of the gross sixteen and a half million school population a little over eleven million, and the average number of days attended by each was eighty-seven.[3]

Educational facilities in the Southern States are especially inadequate.[4] President Claxton made the following report at the meeting of the Southern Educational Association held in Atlanta, December 29, 1908:

whatever. Furthermore, it was not possible to determine whether they were on the streets, at work, or in their homes.

[1] *1906 Report of Commissioner of Education*, pp. 293–302.

[2] *Ibid.*, p. 337.

[3] *Ibid.*, preface.

[4] See page 10 of this thesis.

All our Southern States have no effective legislation for compulsory attendance, thanks to our democratic form of government! In spite of our short school year, only about 40 per cent. of all pupils of school age receive instruction of any kind whatsoever. In these States the children actually attend school forty-five days yearly, and the whole number of days of school attendance amount to about 675.

(*d*) *Grades Reached by Children before Leaving the Public School.* The same condition holds true regarding the percentage of children completing the grammar and later the high schools. The following cities have been chosen promiscuously to illustrate the degree of education attained by those enrolled.

PERCENTAGE COMPLETING SIXTH AND EIGHTH GRADES IN TYPICAL CITIES

	% Completing Sixth Grade	% Completing Eighth Grade
Los Angeles, Cal.	51	25
Madison, Wis.	60	51
Boston, Mass.	58	38
Chattanooga, Tenn.	33	20
Columbus, Ohio	48	28
Covington, Ky.	41	20
Dayton, Ohio	61	32
Philadelphia, Pa.	28	13
Spokane, Wash.	50	30
Wheeling, West Va.	26	12
Lynn, Mass.	77	43
Memphis, Tenn	11	7
Denver, Colo.	61	32
Lexington, Ky	32	14
Paducah, Ky.	38	23
Cincinnati, Ohio	44	21
Chicago, Ill.	50	29
	45.6	26.3

These averages were computed from the 1905–06 Report of the Commissioner of Education of the U. S. A. If in the compilation of this table, cognizance had been taken of the number who receive no instruction at all, the results would be more unfavorable still.

Commissioner Draper of New York reported the school attendance of twenty-five cities, selected at random in 1908, to be as follows:

GRADES REACHED BY PUPILS ENROLLED IN 25 NEW YORK CITIES

GRADE	Number of Pupils	Per Cent.
First	24,410	100
Second	17,524	82
Third	17,028	79
Fourth	15,918	74
Fifth	14,395	67
Sixth	12,464	58
Seventh	10,152	47
Eighth	8,517	40

Few states in the Union have a better school system than New York State.

Regarding the attendance at high schools, we quote further from Commissioner Draper:

It is interesting to know what the corresponding figures are for the United States. For the year 1904–05, the last at hand, the total attendance upon high schools in the United States was 876,050. The percentage of years was,—first year, 43 per cent.; second year, 26 per cent.; third year, eighteen per cent.; and fourth year, thirteen per cent.[1]

[1] Draper, *Our Children, Our Schools, and Our Industries.*

The majority of high-school students are girls, and the percentage of girls that graduate (more than two to one) presents a still greater proportion over the percentage of boys that are graduated.[1]

I confess that it startles me to find that certainly not more than two-fifths and undoubtedly not more than one-third of the children who enter our elementary schools ever finish them, and that not one-half of them go beyond the fifth or sixth grade.

In a late report of the Bureau of Education we note the same problem discussed.

How many of the children entering the elementary school reach the high school? This question is propounded many times a year to the Bureau of Education. For several years this Bureau has estimated that from 21 to 23 per cent. of the children who enter the schools will reach the high school. An estimate based upon the figures for 1903 and 1911 increases this percentage to 24.45 per cent.[2]

It is hardly less surprising to find only about one-third of the pupils who go to the high schools remain beyond the second year, and that only about one-sixth of those who enter remain to graduate.

It all indicates that the lives of children are being wasted, that there is a sad lack of definite aim and purpose about it all, and that our educational plans do not rationally meet our conditions.[3]

[1] Boys, 37,429; girls, 51,641; graduates in 1907, boys, 2,424; girls, 6,793.

[2] *Commissioner of Education Report*, 1912, p. 17.

[3] Draper, *Our Children, Our Schools, and Our Industries*.

3. Comparison with Germany. (*a*) *Attendance.* German records show that the pupils attain a much higher grade before leaving school. The following shows the public school attendance in Prussia in 1901:

In Eighth	Grade	400,000	Pupils or about	42%
" Seventh	"	500,000	" " "	53%
" Sixth	"	650,000	" " "	68%
" Fifth	"	700,000	"	
" Fourth	"	750,000	"	
" Third	"	850,000	"	
" Second	"	900,000	"	
" First	"	950,000	" " "	100%

The following shows the attendance for the past three years in the public schools of Chemnitz, one of the leading manufacturing cities in Germany:[1]

GRADES REACHED ON LEAVING THE SCHOOL

Enrolled in 1898—4,412 children

Discharged 1906 from	8th grade	2,124	children
	7th	1,081	
	6th	577	
	5th	150	
	4th	2	
	2d	1	child on account of physical defect
	2d	53	children sent to school for backward children
	1st	15	
	Total	4,003	children

[1] Written communication from the Bürgermeister.

GRADES REACHED ON LEAVING THE SCHOOL

Enrolled in 1899—4,339 children

Discharged 1907 from	8th grade	2,250	children
	7th	1,024	
	6th	523	
	5th	151	
	3d	50	children sent to school for backward children
	2d	22	
	1st	2	
	Total	4,022	children

Enrolled in 1900—4,607 children

Discharged 1908 from	8th grade	2,396	children
	7th	1,161	
	6th	545	
	5th	159	
	2d	1	child on account of physical defect
	2d	65	children sent to school for backward children
	1st	15	
	Total	4,342	children

From the above tables we see that about 300 children are lost throughout the eight-year period by death or removal to some other school district. If we subtract this number from the number enrolled in the first grade, the results show that in the city of Chemnitz:

More than 94% complete the sixth grade
" " 76% " " seventh grade
" " 50% " " eighth grade[1]

[1] Written communication from the Burgermeister.

The following table shows the number in the grades in Chemnitz in 1913.[1]

On Easter, 1913, there were:

	Discharged					Enrolled
Grade	VIII	VII	VI	V	Total	First Grade
Boys	1,497	623	281	66	2,467	3,113
Girls	1,806	660	249	68	2,783	3,156
Total	3,303	1,283	530	134	5,250	6,269

Note the great improvement since 1908. Now about 57 per cent. of the boys and 65 per cent. of the girls actually complete the eight grades.

According to the figures for 1907, 62 per cent. of all children of Munich that entered the public schools in the first grade completed at least seven grades before leaving the school.

The table below shows the enrollment in Munich for the year 1913. Here again we note an improvement over the year 1907.

Total Number of Pupils in Grades in 1913

Grade	Boys	Girls	Total
I	5,305	5,314	10,649
II	5,027	5,099	10,126
III	5,321	5,113	10,434
IV	5,314	5,308	10,622

[1] Written communication from the Bürgermeister.

TOTAL NUMBER OF PUPILS IN GRADES IN 1913

Grade	Boys	Girls	Total
V	4,559	4,890	9,449
VI	3,767	4,353	8,120
VII	3,223	3,319	6,542
VIII	2,486	1,488[1]	3,974
School for backward children	333	226	559
Total	35,365	35,110	70,475

NUMBER OF PUPILS LEAVING EACH GRADE IN 1913

Grade	Boys	Girls	Total
I	——	——	——
II	——	——	——
III	——	1	1
IV	10	4	14
V	39	4	43
VI	176	24	200
VII	564	92	656
VIII	2,486	1,388	3,874
School for backward children	42	2	44
Total	3,317	1,515	4,830

The figures for the capital of the Empire, according to the official report for 1908, showed that the following percentage of those who en-

[1] Girls are obliged to attend for seven years only. A new law has just gone into effect which will require attendance for eight years.

tered the first grade had completed the grades below specified before leaving school:

Grade	1908	1907	1905
VIII	43.32%	41.02%	37.06%
VII	28.99	29.88	30.36
VI	16.09	17.67	19.68

According to this analysis 88.04 per cent. of the pupils fourteen years of age had completed six grades of schooling, 72.31 per cent. seven grades of schooling, and 43.32 per cent. eight grades of schooling.

The table below shows the grades and promotions in 1913:[1]

PUPILS DISCHARGED AFTER HAVING COMPLETED EIGHT YEARS OF OBLIGATORY SCHOOL ATTENDANCE

From Grade	1912	1911	1909	1907	1905
VIII	12,504	12,366	11,155	10,020	9,028
VII	6,653	6,910	6,966	7,301	7,395
VI	3,408	3,662	3,758	4,317	4,794
V	1,358	1,356	1,397	1,862	2,093
IV	287	365	332	569	754
III–I	47	56	57	84	119
Classes for backward pupils	454	408	323	277	178
Total	24,711	25,123	23,988	24,430	24,361

[1] This table was supplied by the city Council of Berlin.

THE SAME REDUCED TO PER CENT.

Grade	1912	1911	1909	1907	1905
VIII	50.60	49.22	46.50	41.02	37.06
VII	26.92	27.51	29.04	29.88	30.36
VI	13.79	14.58	15.67	17.67	19.68
V	5.49	5.49	5.82	7.62	8.59
IV	1.16	1.45	1.38	2.33	3.09
III–I	0.20	0.22	0.24	0.34	0.49
Classes for backward pupils	1.84	1.62	1.35	1.14	0.73

THE FOLLOWING FIGURES GIVE THE PERCENTAGE OF THE PUPILS THAT WERE PROMOTED FROM ONE GRADE TO THE NEXT

Grade	1907	1908	1909	1910	1911	1912	1913
I	86.9	89.82	89.93	90.22	91.00	90.35	90.89
II	87.4	88.95	89.32	89.70	89.59	89.03	89.39
III	86.3	87.82	88.32	89.21	88.80	88.46	88.67
IV	84.2	87.79	87.56	88.01	88.77	88.32	88.26
V	85.9	88.39	88.23	89.64	89.00	88.83	89.11
VI	85.1	86.76	87.17	88.15	88.70	87.96	87.76
VII	78.6	83.45	83.57	85.03	85.37	84.29	85.15
Average	85.4	87.88	88.27	88.78	88.94	88.38	88.64

Thus we note that in 1905 37.06 per cent., in 1908 43.32 per cent., and in 1913 50.6 per cent. completed eight grades. The improvement in all other grades is similar, as is borne out by the latter part of the table.

The American city records are appalling compared with the Chemnitz record! No doubt later

records for Prussia would show themselves to still better advantage, but as it is, our investigation makes us safe in stating that Germany graduates fifteen to twenty per cent. more of her pupils from the eighth grade, and twenty-five to thirty per cent. more from the sixth grade than graduate from the same grades in the United States.

From these records, it is at once obvious how decidedly the attendance records show Germany to an advantage; and at the same time what a great task the school authorities in the United States have to perform before their children will be able to take up industrial and commercial studies with the same preparation as the children in Germany are now in a position to do.[1] The children in cities of 8000 or more inhabitants are on an average about two months behind the German attendance, while the period of attending school amounts in the case of the remaining two-thirds of the American children to less than half that utilized in Germany.[2]

To this must be added the fact that no one who understands the American school system and knows what a powerful pressure is put upon the teachers by the superintendent, principals, and

[1] Germany learned in the early seventies that continuation schools could never be fully successful without a thoroughly executed compulsory public-school system; and after several decades of strenuous labor, she brought every child into the schoolroom.

[2] *Verwaltungsbericht des königlichen preussischen Landesgewerbeamts*, 1905, p. 1.

patrons to pass pupils from one grade to the next, whether they are prepared for such advancement or not, would doubt for one moment after visiting German schools for a while that those passed in the German schools from one grade to the next know their subject far better on the average than those of the corresponding grades in the United States.[1]

The grade comparison which we have just made proves beyond dispute that as far as the amount of knowledge comes into consideration as a requisite for the pursuit of industrial and commercial training, the advantage lies decidedly with Germany.[2]

(*b*) *Illiteracy of the Two Nations Compared.*[3] If

[1] Superintendents and principals must please the patrons, and teachers must please the patrons, the superintendents, and the principals. Many patrons feel that their children are acquiring knowledge as long as they pass from one grade to the next. Superintendents, principals, and teachers must make a show of progress, though the interests of the school suffer thereby. Hence pupils are passed! As is well known, the positions of city superintendents and principals are frequently secured because the applicants are greater politicians than school men.

[2] A generation ago Karl Schröder wrote that one of the main reasons why the German children were so little able to make the most out of industrial instruction was the fact that their grammar school education was so deficient.—Schröder, *Hervorragende Förderungsstätten des deutschen Handwerks*, p. 118.

[3] "The Federal Census for the year 1910 shows that at the time the census was taken there were in the United States 5,516,163 persons ten years of age and over unable to read and write. This was 7.7 per cent. of the total population ten years of age and over . . . ." "Of these illiterates, 3,184,633, or 58 per cent., were white persons, 1,534,272, or 28 per cent., were native-

we compare the two countries with respect to illiteracy, we find that in 1900 the United States had 63 whites and 445 negroes per 1000 who were

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born whites, and 1,650,361, or 30 per cent., foreign-born whites; 2,227,731, or 40 per cent., were negroes. The remaining 2 per cent. were Indians, Chinese, Japanese, and others. Of the total number of illiterates, 1,768,132 lived in urban communities and 3,748,031 in rural communities, in small towns, villages, and open country. Of the urban population, 5.1 per cent. were illiterate; of the rural population 10.1 per cent."—*U. S. Bureau of Education Bulletin*, 1913, No. 20, p. 7. "The census reports show that in 1910 there were 2,273,603 illiterate males of voting age—that is, twenty-one years of age and over, of whom 617,733 were native-born whites, 788,631 foreign-born whites, and 819,135 negroes. The per cent. of illiteracy of the total male population of voting age was 8.4; of the native-born white men, 4.1; of the foreign-born white men, 11.9; of the negroes, 33.7. The total number of illiterate men of voting age in the entire country was greater than the total number of men of voting age in the States of Kentucky, Tennessee, Alabama, Mississippi, Delaware, and the District of Columbia. In some States, and in many counties, the illiterate voters hold the balance of power in any closely contested election.

"The problem of adult illiteracy is no longer one of race or of section. In 1910 the total number of white illiterates was greater by 956,902 than the total number of negro illiterates, and the number of illiterate white men of voting age was greater by 585,229 than that of illiterate negroes of voting age. Massachusetts had 7469 more illiterate men of voting age than Arkansas; Michigan, 2663 more than West Virginia; Maryland, 2352 more than Florida; Ohio, more than twice as many as New Mexico and Arizona combined; Pennsylvania, 5689 more than Tennessee and Kentucky combined. Boston had 24,468 illiterates over ten years of age; Baltimore, 20,325; Pittsburgh, 26,627; New Orleans, 18,987; Fall River, 12,276; Birmingham, 11,026; Providence, 14,236; Nashville, 7947; Washington City, 13,812; Memphis, 8855."—*U. S. Bureau of Education Bulletin*, 1913, No. 20, p. 9.

illiterate.[1] Germany in 1903 had only 4 per 1000.[2] To be sure the United States has a larger proportion of foreigners who are illiterate than has Germany. It must also be recognized that the mere ability to read and write is far from being the sole qualification for taking up industrial and commercial studies.

(*c*) *Comparison of the Teaching Staff of the Two Countries.* Teaching in the public schools cannot be said to be a regular profession as is law, medicine, etc. It is adopted largely as a temporary occupation by young men who are preparing for some other profession or for higher literary institutions, and by young women until they marry.

[1] The State ranking fourth in respect to illiteracy is Kentucky. "Thoughtful people were amazed when they realized that within the borders of Kentucky there were 65,000 illiterate white voters; that 4500 log school houses, not fit for cattle, were in use; that there was more illiteracy in the ten counties constituting the famous Bluegrass section than in all of Massachusetts and that hundreds of men were connected with the public schools who could neither read nor write!!" Kentucky has a national reputation for lawlessness, mobmania, and night-riding, but in contrast to all these the State Superintendent thinks that ignorance is the sorest spot in Kentucky. "At the risk of being dogmatic I suggest that there is one great lack. To my mind it is not lawlessness, nor mobmania, not night-riding, primarily, but it is ignorance. Ignorance is the sore spot in Kentucky, and I use the word ignorance in its broadest sense. We must educate!!" —Louisville *Courier Journal*, Jan. 27, 1909.

[2] Among the Prussian recruits of 1908, the number who could neither read nor write was 0.02 per cent. Among 9975 soldiers which Prussia furnished for marine service during that year not one was illiterate.

The average period of service covers a little more than four years.

In the cities the teachers are usually quite well prepared for their work, high school teachers being largely college graduates; and in the grades, graduates of high schools or normal schools. In the country, teachers begin their career in their eighteenth or nineteenth year, and a large majority have had practically no training other than the country school course. Those that continue in the work usually supplement their training by a year or more spent at some normal school.

In the Southern States the country school teachers take up their career with a preparation inferior even to that obtaining in the Northern States. In a report concerning school conditions in the Southern States, President Claxton says:

> Even now the most of the teachers do not have an adequate literary and professional training. Less than 25 per cent. of the country school teachers have had a high school training. More than half of them have completed an elementary school only. Less than ten per cent. of all these teachers have had any kind of pedagogical instruction.[1]

It is apparent that the American public school, especially if the average institution be considered, is handicapped in not having teachers trained according to Germany's standard. The American

[1] Claxton, Southern Educational Association, Atlanta, Ga., Dec. 29, 1908.

schools are the gainers, however, in the youth of its teaching force. Youth is hopeful, enthusiastic, ambitious, plans great projects; and these elements implanted in the American boys and girls by a young and highly active teaching force, make themselves felt in the industries of the country.

(*d*) *Goal of the Schools.* The goal in the American schoolroom prompts every boy and girl to strive to rise into a higher position than the one into which he was born. This results in a disinclination for manual labor.[1]

[1] "No boy in an American school looks forward to digging and delving for hire as a means of livelihood, nor does any girl contemplate domestic service as her future work in life."—Rev. Finlay, *Mosely Educational Commission Reports*, p. 102.

The American farmer, when visiting the district school is always called upon to make a speech. He usually calls the attention of the children to the fact that we have a great and glorious country, where everybody can be great and powerful, if he only will, and he rarely ends his speech without saying that the poorest boy may some day be the nation's president. It is interesting to contrast such an ideal with an experience that the writer noted in a German school. A great university was to have a centennial celebration in another decade. The teacher expressed the hope that upon this occasion the pupils might be in the city to stand on the street corners and see the people pass by. With us the teacher would have said that he hoped that many of them would be members of the university by that time and be in the procession itself rather than have the mere opportunity of seeing the greatness of someone else!

"From the bottom to the top of the school system the eye is on the school above, and the school above leads to a professional or a managing employment rather than to a trade vocation." —Draper, *Our Children, Our Schools, and Our Industries*, p. 9.

"American children are taught that they must hold themselves above unskilled labor. It is, however, no uncommon

The goal in the German school is a very practical one.[1] The pupils are prepared with a view to their life work. We have already noted in the curriculum that "Handarbeit" plays an important rôle in the curriculum for girls, also that cooking is receiving special attention in the cities. Such attention as is devoted in the United States to this accomplishment is given in the belief that it constitutes an intellectual stimulus rather than because of the conviction that all the world must work.

The object of this chapter has been to determine how well German and American children who leave the public schools are prepared to take up industrial and commercial instruction.

Up to the present our investigation shows the advantage decidedly in favor of Germany with reference to the time spent in school, the grade

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thing to find young men and women in industrial and domestic service in this country who were better trained in elementary knowledge of reading, writing, and mathematics, as well as the simple arts which make for ordinary efficiency before they came to this country, than the young people of similar age and social plane are who have always lived here. They are happier and of more value to the country for it."—Draper, *Our Children, Our Schools, and Our Industries*, p. 8.

[1] "The German purpose seems to be to train the boys and girls so as to add to the physical and therefore to the military strength of the Empire. The American purpose is to train boys and girls so as to enable them to make the most of themselves. Our ideal seems to be the noblest, but as yet the Germans are more widely and more uniformly realizing their ideal than we are ours." —Draper, *Our Children, Our Schools, and Our Industries*, p. 23.

at which pupils leave the school, the thoroughness with which the subject matter is mastered, the goal of the school itself, and its organization and teaching staff. But all these advantages are counterbalanced, to a certain extent, by the high initiative instilled in American pupils. The American spirit is more optimistic than is the German, more ambitious to attempt new things, full of high ideals and aspirations; that spirit is the heritage of every American child.[1] In the American school, more difficult tasks than the children are able to accomplish, are frequently assigned for the purpose of stimulating a desire to overcome obstacles.

The tendency toward independence is also shown in the United States in the greater consideration given to the personality of the individual

[1] A point which strikes the British visitor to the United States in connection with education is the constant preoccupation of the American educationalist as to certain objects which are not usually considered in England to be essential to education. Thus, every American teacher, primary as well as secondary, endeavors to infuse a current of good humor, of joy of life, into his or her pupils,—a joy of life which never forsakes them. This accounts for the bright smiling faces one encounters everywhere amongst American children and native-born Americans. The American teacher never loses sight of the greatest object of all child-training—preparation for adult life, the development to its fullest possible extent of the child's moral and physical capacities. "The acquisition of knowledge is becoming of less and less importance as compared with the development of character, health, and adaptability and with the making of the handy man and handy woman who can turn themselves to anything."—Barclay, *Mosely Educational Commission Reports*, p. 399.

pupil, and recognition of an equality between teacher and pupil. A military atmosphere reigns in the German school. The pupil is expected to obey, and for that reason the spirit of independence finds less favorable soil than is offered in American schools.

The American children are encouraged to use the library, and indeed a great many books outside of those prescribed in the curriculum are read. In both of these respects the German system differs widely from our own. There the lessons are always so assigned that the pupil can and must master them. Text-books are few in number and few books outside of these are read.

It is obvious that the German method well prepares the pupil for the performing of future tasks; but it does not call forth originality and self-reliance as does the American method.[1]

More value is attached to good habits and morals in American schools than is the case in German schools. The anti-alcohol and anti-tobacco movements are indebted in no small degree to the great strength and power which has been fostered in the American school.[2] What

[1] It is often remarked in the United States that the German skilled workman does well and thoroughly what he has been taught to do, but seems to be rather slow in originating new designs for new circumstances.

[2] The author attended a reading recitation in a German school. The story closed with the statement that a certain boy had received as a reward for his faithfulness a pipe with a golden lid and stem, which enabled him to displace an old pipe that he had

Germany accomplishes in this field is insignificant compared with achievements in America. How far the endeavors to influence the initiative and moral direction of the American child will enable him to keep pace with the more advanced and more thoroughly trained German pupil, does not admit of statistical proof, but must be left to personal judgment.

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formerly used. The selection of such a story would be well nigh impossible in the United States on account of the practically unanimous feeling that such an ideal would be detrimental to the boy's best interests.

II

AN HISTORICAL SKETCH OF THE BEGINNINGS OF THE INDUSTRIAL AND COMMERCIAL CONTINUATION SCHOOLS BEFORE THE "'SEVENTIES"

1. Continuation Schools a Sign of Advancing Culture. The continuation school idea sprang into existence from a feeling on the part of the Church that the home influence was not sufficient to enable the child to meet life's duties successfully. The interest of the Church in morals and salvation found expression in an ever-extending control over the rearing of the child. In consequence of the meager schooling for the youth, the Church of the sixteenth century conceived the idea of prolonging the period of religious instruction. In Germany, in the year 1589, the Bishop of Samland came forward with a plan.[1] The centuries following witnessed a mass of Church edicts calling for the establishing of continuation schools of a religious type. Württemberg led the way, followed by Baden and Bavaria.

In consequence of the irregularity of attendance, the inefficiency of the teachers, etc., the results attained were not decidedly marked. Pache comments on these results in the following terms: "The

[1] Pache, *Forthildungsschule*, book i., p. 21.

shortcomings were recognized all the more keenly as the value of a higher degree of intelligence came to be appreciated."[1]

2. The Transition of the Old-Time Sunday School to One of a More Literary and Industrial Type. History offers numerous examples of new movements that attached themselves to already existing organizations. Sometimes the form and method of procedure of an organization, that up to the present time has been only partially successful in its original purpose, are seized upon; again, the machinery of a movement that was once powerful but now on the decline is adopted.

An illustration of this type of development is presented at the close of the eighteenth and the beginning of the nineteenth centuries by the Sunday school, the character of which was transformed from one of religious instruction purely to one placing more and more emphasis upon cultural and industrial subjects.[2] Naturally enough, the

[1] Pache, *Fortbildungsschule*, book i., p. 21.

[2] The decline of work in the skilled trades was assignable in no small degree to the inadequate mental development of the workers. The constantly growing trade, and the early beginnings of the factory system demanded a better trained people. Even in the country districts, the Sunday school was used to supplement the instruction that had been cut short during the harvest months. In the flourishing agricultural State of Wurttemberg attendance upon the Sunday school was required by law as early as 1695. In the eighteenth century the several German States of Baden, Bavaria, and Prussia organized Sunday schools in which reading, writing, and arithmetic were taught.

Church pursued its activities in this industrial realm on the theory that such a course would in the end accrue to the advantage of the Church.

(*a*) *Social Revolution.* The great economic and social revolutions of the seventeenth and eighteenth centuries created a transformation of society. In these centuries the guilds gradually lost their importance, and by the close of the eighteenth century, the movement for more or less freedom in trade and for the entering of occupations had asserted itself. The household economy, known as "Hausindustrie," was supplanted by the small factory, the means of transportation were greatly improved and the expense reduced; hence trade gained a decided impetus. Furthermore, the doctrine of free trade (the chief exponent of which was Adam Smith) found an ever-increasing number of followers and the rivalry of foreign markets made itself felt. Thus the old-time handicraft proved less and less capable of competing in the markets. This was particularly notice-

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The compulsory period of attendance extended usually until the eighteenth year. In Hohenzollern it reached the twentieth year. The attendance requirements were strictly observed. In Bavaria no one could be a party to a business agreement, contract a marriage, or become a journeyman, who could not show that he had attended the continuation school regularly.—Pache, book i., p. 21.

Frederick William decreed in 1716 that all adults must attend a winter school. In 1763, Frederick the Great ordered that Sunday schools and review schools be established and that all unmarried people should receive instruction in reading and writing.—Siercks, *Das deutsche Fortbildungsschulwesen*, p. 18.

able in the industrial districts of the South German States, also in Hamburg and other coast cities.

(*b*) *The Influence of Famine.* Many of the economic and educational revolutions trace their origin to a famine. Even to the present day, the traveler in the Erzgebirge of Saxony will be told repeatedly by the working classes that several centuries ago there was a famine amongst them, caused by the extinction of the silver mines. In 1561, a noted benefactress, Barbara Uttman, taught the women the art of lace-making, and thereby restored prosperity to the land. A beautiful monument has been erected to her memory.

After some years of famine, Württemberg made vigorous efforts to introduce industrial instruction into the Sunday schools. This reform was accomplished in 1816. Hamburg underwent a similar experience.

This whole point of view will be seen more clearly when we come to consider the industrial school legislation of the several cities and states.

(*c*) *The Antiquated Apprenticeship System Superseded by a New Form of Technical Training.* In this transformation the old-fashioned apprenticeship system sustained great injury. Owing to the great competition, the master workman was so completely engaged that he had no time to teach the apprentice thoroughly; and again, owing to a constantly increasing division of labor, the imparting of comprehensive instruction in any one trade was rendered more difficult.

In this manner the old system of apprenticeship fell into discredit. The demands of the rapidly expanding industrial life gradually necessitated special technical instruction, the extension and development of which depended upon the degree of culture of the several communities, the technical and economical possibilities, the varieties of industrial occupation, and above all upon the money obtainable for such purposes.

(*d*) *Political Reorganizations, as well as New Inventions, the Incentives of Innovation in Continuation School Development.* The constantly changing political relations of the German States in respect to each other and to the outside world likewise influenced industrial education.[1] New inventions in special branches of industry necessitate entirely new courses and changed methods of instruction.

The degree of rapidity with which these revolutions took place varied in the several States. The final forms of the courses of study, that ever adapted themselves to the changed conditions, were necessarily unlike. The variations seem to

[1] Some of the historical events that influenced industrial education were the Napoleonic Wars, which killed some industries and brought others into existence. On this depended naturally the origin or ruin respectively of the corresponding trade schools. The inauguration of the tariff made itself indirectly felt in the domain of educational matters. Through its favorable or unfavorable influence whole branches of industry were built up or destroyed. When Berlin was made the capital of the German Empire, the industrial schools progressed correspondingly to the importance of the city.

some extent to be traceable to the different religious confessions.[1]

3. Brief Survey of the Development of the Continuation Schools in the Leading German States.

A. Württemberg

(*a*) *Origin and Growth of the Movement before the Dispensation of 1836.* Württemberg, which took the lead in founding continuation schools of a religious and cultural character, was also the State that blazed the way when the time came to change these schools into an industrial form in order to meet the improved economic, social, and cultural conditions.

On the one hand, the famine, which has already

[1] I found some very prominent school men who claim that the particular religious confession of the several States and communities had an enormous influence in the advance of industry and industrial schools. With reference to this point I read in one of the large dailies the following statement, "As we have observed in our former studies, it is always the Protestant sections in which great industries arise. Catholic Aachen is no exception, since even there the manufacturers themselves are Protestants. Another of the numerous examples is Plauen. The Reformation above all else, laid the foundation of the commercial importance of this city. Much of the industrial prosperity of the present-day Germany must be credited to the pioneers of the Reformation that operated here. These Swiss and Swabians, exiled on account of their religious beliefs, settled in Plauen as the first cotton weavers, and thereby laid the corner-stone of the present day industrial prosperity of the district."—Heinrich Lee, *Berliner Tageblatt*, July 26, 1908.

been referred to, and on the other, the feeling that the old-fashioned method of education did not meet the advanced technical demands, and that German art and handicraft were inferior to that of England, seem to have been the occasion of starting-points of industrial schools in Württemberg in 1818. In 1826, Sunday trade schools already existed in eighteen cities. In 1828, there were thirty-seven such schools in Württemberg. The best one was in Ulm. It had six teachers and 328 pupils.

(*b*) *The Law of 1836.* In 1836, the whole movement was regulated by law. Pupils whose attendance at public schools was no longer required were obliged to attend Sunday school until their eighteenth year, in so far as they were not in attendance upon a higher type of literary school or a special industrial continuation school. We note in this law a kind of indirect compulsion of attendance upon a trade school.

In 1846, we find 4500 pupils in the sixty-nine trade schools of the various cities and villages. Of this number forty-six schools had instruction only two hours a week, and thirty-eight had only one teacher each. That the movement still depended upon charity is evidenced by the fact that fifty-five of the sixty-nine schools paid no salaries to their teachers.

(*c*) *The Royal Commission of 1853.* In 1853 a Royal Commission of industrial continuation schools was instituted. The Commission was

put under the Ministry of Churches and Schools.

The chief regulations made by this Commission were these:

1st. In general, the Sunday trade schools shall not only be maintained in their former functions, but shall be improved in conformity to the industrial requirements of the locality and in accordance with the possibilities of obtaining money and teachers. The course of study shall be extended to include hours of instruction in the morning and evening of week days.

2d. In the chief industrial cities the industrial continuation school instruction shall, as far as possible, have the following organization:

(a) For those apprentices who by reason of their talent and future opportunities neither desired nor were able to obtain a complete training, the instruction shall be concentrated upon the most important matters, and the time of instruction shall be limited to Sundays.

(b) For the more talented and ambitious, two courses shall be organized, one for the apprentice, and another for the journeyman. The instruction shall be given on week-day evenings. The course of study for the apprentice shall be,—written compositions pertaining to industries of all sorts, industrial arithmetic, geometry for industrial purposes, and, finally, drawing along the lines of these two studies.

In the higher course, mathematics and drawing

(including modeling) shall be continued. There shall be added to these, industrial physics and mechanics, industrial chemistry, and finally, bookkeeping and the chief principles of trade economy.

3d. The attendance upon the industrial continuation school is voluntary.[1] Hereby it is further ordered that all must attend the ordinary Sunday school in so far as they are not in attendance upon one kind or another of the continuation schools. Regularity of attendance shall be insisted upon, and repeated unexcused absences shall be punished by expulsion, and the obligation to attend the Sunday school.

4th. The industrial continuation school shall charge a tuition proportioned to the local conditions.

5th. All industrial continuation schools are district institutions. The immediate supervision and guidance shall be in the hands of a district board, which may call to its assistance mechanical trade specialists and the principal of the school, who shall form a subcommission, for the purpose of planning and supervising instruction.

6th. The district is, in the first instance, responsible for the expenses of the school. An effort shall be made to have the district corporation vote an annual sum regularly, and it is expected that the local trade-weaver's union and guilds will share the expenses, particularly in the

[1] It was believed that such a regulation would attract only the most talented and ambitious.

cases of the poorer children. In so far as the expenses are not met in this way, the royal authority is empowered to appropriate certain sums to be paid by the State.

(*d*) *Continuation Schools for Girls.* In the early 'fifties provision was made in Stuttgart to instruct the girls in bookkeeping and correspondence, and soon other cities followed the example. The necessity was obvious. Many girls must sooner or later provide for their own livelihood, and also assist in maintaining others. Frequently an unworthy or incapacitated husband must be supported. A separate department in the continuation school was established for girls in 1861. The course of study embraced all kinds of household work and all branches of the industrial and commercial school.

(*e*) *Teachers.* The theoretical and literary studies were taught by the public-school teachers. The drawing courses were given by teachers of the higher schools, and, whenever possible, by men of practical experience, who were appointed on a part-time basis. Only in the larger schools were drawing teachers placed on a full-time basis.

(*f*) *Economic Conditions and Continuation Schools in Their Reciprocal Relation.* The rise of industrial and commercial schools went hand in hand with an undeniable advance in trade and in industry. Already in the year 1863, Marlen described the economic condition of Württemberg as follows:

In no other field of economic advance has Württemberg experienced such a complete change during the last generation as it has in the field of manufacturing, and this in direct connection with trade and transportation. It is the period in which Württemberg went over from a predominatingly agricultural status to one of manufacture and wholesale industry.

Genauck says with reference to this period:

The entire horizon and social position of the industrial classes changed wholly, and the productivity of men and trades, and thereby the National prosperity, were more than doubled. To-day the percentage of population engaged in industry ranges from 36 to 38 per cent, and the ever rapid increase is meeting few obstacles in its path.[1]

The necessary reciprocal effect of this advance in economic conditions was favorable to continuation and trade schools.

Owing to their great differences [as Genauck says], the achievements, as well as the means and manner through which the results were accomplished, were similar in nucleus only, and perhaps not every one recognized how in these schools even the germ of something higher would develop itself. In how unintentional and unforeseen a manner institutions grow into independent forces that could not have been wrought, even if premeditated, except by long and repeated trials![1]

[1] *Die gewerbliche Erziehung*, by Carl Genauck, 1882, p. 3.

B. Bavaria

One can say in general that Bavaria in comparison with Württemberg proceeded rather slowly to change the continuation schools into those of the industrial type.

With reference to religious and cultural education, the law of 1803 was one of the earliest and the best, and with few exceptions is still in force to-day. The following are the chief stipulations:

1st. In all cities, centers of trade, and villages, Sunday schools shall be erected and sessions shall be held (except in harvest time) on every Sunday and legal holiday.

2d. The pupils enrolled were to be,

a. Journeymen
b. Apprentices
c. All young people of both sexes.

3d. Attendance on the part of journeymen was to be voluntary. Apprentices were obliged to attend, unless they could show a certificate, granted by the inspectors and pastor, showing a certain degree of efficiency.

4th. All boys and girls between the ages of twelve and eighteen years inclusive, in cities, market centers, and villages are obliged to attend.

5th. "We decree, that the first half hour of the instruction shall be devoted to religion and morals."

The other subjects were reading, writing, and arithmetic. The time devoted to instruction was

arranged to suit local conditions, but two hours a week was the minimum amount permitted. The sexes were to be instructed separately, when possible.

Even to-day, the country districts and small villages have no better continuation schools.

The proof that the law was passed for the most part in the interest of the Church, is evidenced by the fact that both sexes were to be the recipients of its blessings. When economic and social ends are to be attained, then one may be assured that Germany will look out for the boys first.

There were relatively few trade schools before 1870, and the reason for this may be traced, without doubt, to the exceptionally strong influence of the clergy in school matters.

C. Baden

In addition to the causes favoring industrial education, already mentioned with reference to the other States, Baden enjoyed a decided advantage in having had exceptionally far-sighted princes whose influence upon industrial school legislation was very progressive. As early as 1803, industrial instruction was instituted for young people engaged in weaving or handicraft.[1]

In 1834, trade schools were erected in all leading industrial cities of the Grand Duchy. They were planned for such young people as were secur-

[1] See Lexis, *Das technische Unterrichtswesen*, book iii., p. 166.

ing practical industrial experience, and the students were to obtain such knowledge and dexterity as would make an intelligent pursuit of their trade possible.[1] The subjects to be studied were free-hand drawing, arithmetic, geometry, industrial economy, and bookkeeping. The schools presupposed the knowledge gained in the public schools only. Pupils who had not completed the public schools attended the ordinary continuation school and studied drawing only in the trade school.[2] The greater part of the expense was borne by local communities, although many schools secured a subsidy from the State, or a private endowment. A small tuition fee was also charged. The direction of the schools was entrusted to a school committee that was composed of the mayor, the first pastor of each religious confession, three men engaged in the industry, a technical specialist, if there was one in the place, and the principal of the school.[3]

In the course of the following thirty years, we note a rise in these schools in many ways, and a standstill in others.

> The instruction shall be given on Sundays, holidays, and in the evenings of the weekdays, at least six hours a week for each class. As a rule, the course shall cover a period of three years, and never less than two.[4]

[1] See Lexis, *op. cit.*, p. 167.
[2] *Ibid.*, p. 167. [3] *Ibid.*, p. 168. [4] *Ibid.*, p. 168.

The introduction of freedom of trade in 1862 brought on a period of depression in the trade-school activity, inasmuch as the compulsory attendance system was abolished, and the entrance into the schools was left to the discretion of the parents or guardian.

Some years later the schools were again actively supported and fostered by legislative enactment. Of this we shall learn more in the next chapter.

D. Saxony

The Kingdom of Saxony is a mountainous region which furnishes a great deal of water power and is rich in minerals. Though the mountains afford a great variety of climate, they make the land unsuitable for agriculture on an extensive scale. Conditions have produced various types of inhabitants which may be grouped as, first, the mountaineer class, who, on account of the uncertainty of employment in the mines, engage in agriculture as a side issue, and second, a class of buyers and traders, including those engaged in transportation, who transport the minerals or products by boat, and import foodstuffs and textile goods.

Out of these two classes, there has been built up in the course of time a third class, who by their activity, industry, and intelligence have accumulated wealth. The great variety of climate and the economic conditions, the concentration of a large population in a small area, the constant

touch with all the luxury that wealth makes possible,—all this in the course of time has produced a many-sided, industrious, and intelligent people such as the Saxons represent.

In the Saxon soil, the Reformation struck its deepest roots, and here also industrial education, as a sort of new "Reformation," was received with open arms. Of the 125 more important trade schools in Saxony at the present day, five were founded before 1830, and six more had reached the zenith of their prosperity before 1850. Before the founding of the German Empire, trade and industry were highly developed, and were being supported by more than twenty industrial and ten commercial continuation schools. Aside from these, the more important communities and centers had already inaugurated before 1830 industrial continuation schools with voluntary attendance. Their object was to supply the deficiencies of the public school training and to complement the practical experience of the shops with a good theoretical course. Furthermore, it was thought that the growing youth, those who had just been confirmed, should be afforded an opportunity to make good use of free time instead of wasting it in riotous amusement and dissipation.

In Saxony, as was the case in other States, these schools were supported in the beginning by philanthropists and guilds; later, more and more by the cities and the State.

A century of industrial education,—that is one

of the reasons why Saxony is to-day the heart of the German manufacturing region.

E. Prussia

(*a*) *Character of the First Schools.* The first attempts to help handicraft date from 1705. In that year Semmler founded a mathematical handicraft school in Halle. In the year 1747, Hecker founded a mathematical *Realschule* in Berlin.[1] Many other endeavors in this direction found a receptive soil in Prussia just before the year 1806.[1]

Review schools, institutions for the furtherance of religion and morals, often under the name of Sunday schools, appeared by the close of the eighteenth century. These came into existence for the most part through local initiative, frequently intelligently fostered by the local government. In certain parts of "Schlesien," particularly in the district of Oppeln, compulsory attendance at Sunday school (Catholic), based on laws dated 1763, 1765, and 1801,[3] was in force up to within the second half of the nineteenth century.

Nevertheless, the achievements in the continuation school field before the last half of the nineteenth century were relatively insignificant.

[1] See Schmoller, *Das untere und mittlere gewerbliche Schulwesen in Preussen*, 1881.

[2] *Ibid.*

[3] *Verwaltungsbericht des Königl. Preuss. Landesgewerbeamts*, 1905, p. 2.

(*b*) *Attempts of the Minister of Education to Foster Continuation Schools.* Not until the decree of the Minister of Education in 1844, did the continuation schools experience something of a revival. This report gives a survey relative to the number of pupils at the time, although rather unreliable as to data concerning the general continuation schools. However, one point is clear, and that is, that the number of and attendance upon such schools were small.[1]

The figures for the industrial continuation schools in the cities seem to have been tabulated more accurately. Fifty-eight such schools are credited with 1761 pupils. Be it understood, in this instance, that a numerical conception of the continuation schools meagerly illustrates the situation. The oldest statistical material is practically worthless, and it does not improve much until the 'seventies, though it would be overstating the matter to assert that it is good even then.[1]

In 1846, the Minister of Education issued an additional decree, more suitable to the needs of the people. Apparently a large part of the clergy sympathized with the project quite whole-heartedly. Many so-called continuation schools arose and prospered, only to fall quickly into decline. These organizations could not endure permanently as there were no funds with which to pay the teachers. It was a demonstrated impossibility

[1] *Verwaltungsbericht des Konigl. Preuss. Landesgewerbeamts*, 1905, p. 4.

to build a permanent institution that depended on the unpaid services of the public school teachers. Least of all could it be expected that the much under-paid teacher, kept busy through the week and the Sunday morning service with his official duties, should teach on Sunday afternoon or evening without remuneration.

Though the officials of the cities often voted certain sums, and societies frequently assumed the financial burdens, nevertheless, lack of money was the prevailing condition. The following, taken from the government report of 1848, is typical of the means of support of these earlier schools: "A continuation school has been organized in Perleberg. For its benefit, His Most Serene Highness, Prince of Sayn-Wittgenstein will give an annual concert, and this will no doubt secure permanence for the institution."[1]

(*c*) *The Moderate Results.* Complaints are found in nearly all reports regarding lack of interest and irregularity of attendance. An official report of Trier thus alludes to the condition of affairs:

> We must again declare our respectful opinion, that there can be no hope of a general advance in the continuation school field as long as compulsory attendance is not favorably considered, and the communities are averse toward making any sacrifices by which means may be raised to pay the teachers for these additional services.

[1] *Verwaltungsbericht des Konigl. Preuss. Landesgewerbeamts*, 1905, p. 50.

Except in Silesia and in Posen, and later in the district of Arnsberg, there was no compulsory attendance. On the contrary, the Minister of Education held firmly to the belief that compulsion was inadmissible and that it was desirable to discontinue the enforcement of any laws compelling attendance.

Also, the spending of State funds for these schools was against principle. Their support was a matter wholly dependent upon communities, societies, or private initiative.[1]

The history of the next twenty years is practically one long vain attempt to help these schools advance. In 1863, the Minister of Education issued new instructions in the hope that new life might be instilled into these schools, and at the same time he requested information relative to the subject of compulsory attendance. Concerning this decree, we read as follows:

The government reports show little that is encouraging to the Minister. Unsuitable hours of instruction, late in the evening, and free hours on Sunday, frighten away most apprentices. Only the more far sighted of the Master workmen realized the utility of the new organizations, and above all, there was an insufficiency of funds. The schools declined as rapidly as they had arisen. Compulsory attendance found scarcely an advocate; however, in many reports there was the desire expressed that compulsory attend-

[1] *Verwaltungsbericht des Konigl. Preuss. Landesgewerbeamts*, 1905, p. 5.

ance be instituted for the retarded and backward pupils of the graded schools, because of the very deficient education of so many apprentices.[1]

We read further:

On the positive side, nothing was accomplished either on the part of the government or on that of the community. For a long time Prussia followed in the rear relative to this movement.[2]

In 1850, the few provincial trade schools, which had existed in various parts of the State, received a new stimulus in that the State proposed to pay one half of the expenses, provided the schools came up to certain requirements.[3] But, owing to unfortunate organization, the schools seem to have been of little service. We read: "The remark was often made by the higher class of educated manufacturers and engineers that 'Our Prussian Provincial trade schools don't amount to anything.' "[4] The small part played by these schools in the industry of the time is further shown by the scant attendance, which, in 1867, was only 1146. "But what significance may we attach to 1146 pupils for the whole state of Prussia in 1861, when we

[1] *Verwaltungsbericht des Konigl. Preuss. Landesgewerbeamts*, 1905, p. 8.

[2] Schmoller, *Das untere und mittlere gewerbliche Schulwesen in Preussen.*

[3] See Schmoller, *Ein Wort über den neuen Organisationsplan für die Preuss. Provinzialgewerbeschulen*, 1870; also, *Verwaltungsbericht des Kgl. Preuss. Landesgewerbeamts*, 1905, p. 6.

[4] *Ibid.*

have 534,556 handicraft workers, and 558,321 journeymen and apprentices!"[1]

(*d*) *The Schools with Special Reference to Berlin.* The story of the continuation schools of the capital of the Empire may well arouse astonishment, especially when we behold the magnificent schools of to-day and consider that in 1818, there were 27,000 children of school age of which 8000 attended no kind of school whatever. (See p. 20.)

It is not strange that under these circumstances, the Berlin handicraft apprentice showed an alarming degree of ignorance, and that those who had attended merely common schools were far from possessing,—as the old common law required,—"that adequate knowledge suitable to the life station of each rational individual." A public-spirited man devoted himself to the relief of this clamoring critical state on behalf of the people; who were in despair.

In 1798, Professor Muchler issued a public request for subscriptions, to be used for the establishment of a Sunday school that could offer supplementary instruction to handicraft apprentices. This call found active supporters among the well-wishing and well-to-do classes in Berlin, thus making it possible to open two Sunday schools in 1799.[2]

In 1819, there were five schools in Berlin, with

[1] *Ibid.*

[2] Grumbach, *Die Entwicklung des berlinischen Fortbildungsschulwesens*, p. 7.

a total attendance of 188 pupils, of which number 71 attended regularly, 61 frequently, and 56 very irregularly. The attendance was controlled by a system of stamps. Red stamps were given the apprentice when he was present in school, and green stamps as excuses for absence when detained by the master workman.

In 1828, the number of pupils reached 250, and the number of schools seven, of which one was a school for girls.

The schools were wholly under the supervision of the society, but, in spite of the blessings that they brought to the people, certain guilds and private schools bitterly opposed them.[1]

Regarding the advance of industrial education in 1849, we read:

> Successful as these Sunday schools were, nevertheless in their purpose and essence they were only supplementary to the common schools. The handicraft apprentice was given the opportunity to acquire such facts and discipline as may have been wholly neglected in his elementary school course. The need of real industrial continuation school instruction was not unrecognized. In spite of this, the institutions for that purpose were of very modest character.[2]

The first three continuation schools, supported directly by the city, were instituted in 1849. Their

[1] See Grumbach, *op. cit.*, p. 11.

[2] Grumbach, *Die Entwicklung des berlinischen Fortbildungsschulwesens*, p. 17.

purpose was to give to those young people already in trade or industry an opportunity to make up any part of their previous neglected schooling; also to review, and become more thoroughly grounded on, already acquired facts; and finally to attain a higher scientific education, if perchance life's opportunity or ambition should awaken such an interest.[1]

The hours of instruction for those engaged in industry were from eight to one o'clock Sunday morning. Each session was begun by a short enthusiastic religious service. The studies pursued consisted of reading, writing, arithmetic, drawing, German, French, English, physics, chemistry, natural history, citizenship, and, later, bookkeeping was added.

TABLE SHOWING ATTENDANCE UPON CITY CONTINUATION SCHOOLS

Winter Semester	Number of Pupils	Master Workmen	HANDICRAFT WORKMEN		Total	Commercial Students
			Journeymen	Apprentices		
1849–50	800	—	—	—	—	—
1850–51	1176	8	241	602	851	94
1851–52	1200	—	—	—	—	89
1852–53	1105	11	222	516	749	146
1853–54	1150	11	188	655	854	123
1854–55	1150	7	162	595	764	157
1855–56	988	4	108	571	683	120
1856–57	1123	4	147	686	837	137
1857–58	1188.	7	163	740	910	120

[1] *Ibid.*, p. 19.

Winter Semester	Number of Pupils	Master Workmen	HANDICRAFT WORKMEN		Total	Commercial Students
			Journeymen	Apprentices		
1858–59	1249	6	155	722	883	132
1859–60	1260	4	138	828	970	140
1860–61	1280	3	127	790	920	150
1861–62	1234	2	110	783	895	144
1862–63	1190	2	87	832	921	123
1863–64	1223	3	98	805	906	127
1864–65	1160	3	95	783	881	116
1865–66	1254	5	87	893	985	125
1866–67	1074	0	62	739	801	90
1867–68	1105	2	69	811	882	107
1868–69	1139	1	54	766	821	101
1869–70	1172	—	89	710	799	144
1870–71	1000	—	54	610	664	99
1871–72	1138	—	62	700	762	993
1872–73	1129	—	88	733	821	118

AGE OF PARTICIPANTS IN THE CITY CONTINUATION SCHOOLS

Age	1850	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861
14–16	218	235	348	307	266	347	403	377	470	453	450
17–20	571	528	536	620	567	567	549	623	583	638	611
21–24	196	156	134	123	83	133	130	152	125	104	100
25–30	142	114	85	77	53	53	80	71	61	63	55
31–40	49	72	47	20	16	13	21	22	17	18	15
Over 40	—	—	—	3	3	5	5	4	4	4	3
Total	1176	1105	1150	1150	988	1118	1188	1249	1260	1280	1234

Age	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872
14–16	524	588	644	—	487	—	541	677	620	—	727
17–20	530	485	383	—	500	—	521	409	306	—	300
21–24	101	104	84	—	54	—	38	42	41	—	63
25–30	23	31	34	—	27	—	27	33	21	—	36
31–40	10	12	10	—	6	—	12	11	12	—	3
Over 40	3	3	5	—	—	—	—	—	—	—	—
Total	1191	1223	1160	1254	1074	1105	1139	1172	1000	1138	1129

The tables showing the frequency of attendance and the age of the students bring to light some interesting facts. We note the total number of handicraft workers changes but little; but there is a constant decline in the number of master workmen and journeymen, which is made up by a corresponding increase in the number of participating apprentices.

In the age table, we see that the number over twenty-one years of age is marked by a steady decline, and those over twenty-five years by a still greater decline; on the other hand, the number of participants between the ages of fourteen and sixteen increases constantly.

This phenomenon is noticed also in American schools, and explained for the most part by the fact that the instruction in the case of the older people is not productive of positive results, and hence they become more easily discouraged.

Each student paid fifteen *Silbergroschen* quarterly to the one in charge of the building. The apprentices were excused from payment inasmuch as the majority of them were not in a financial position to pay anything at all.[1]

The organizing of the city continuation schools had the effect of reducing the attendance upon the schools previously established through the initiative of the Society already mentioned. In 1857, new regulations for apprentices were made,

[1] *Aufwendungen für die Städtischen Fortbildungsanstalten.*

that put new life into these schools.[1] The total number in these *Vereinssonntagsschulen*, as they were called, was as follows:

1857, 224; 1859, 641; 1861, 919; 1863, 1143; 1865, 2044; 1867, 1369; 1869, 1113; 1871, 614.

EXPENSES FOR THE CITY CONTINUATION SCHOOLS[2]

Year	Cost of Maintenance (Taler)	Contributions of Students (Taler)	VARIOUS SOURCES		Guilds	Total
			Endowment	Commercial Club		
1850	2871	339	—	100	35	—
1855	4094	166	300	100	59	459
1860	4003	240	300	100	57	467
1865	3684	163	300	—	396	696
1870	3280	129	—	—	77	—
1872	2952	165	—	—	76	—

4. The Situation in General before the "Seventies." The issuing of the *Gewerbeordnung* of the German Federal States in 1869, which regulated all matters pertaining to trade, commerce, and industry, had the effect of reducing the attendance upon these schools. This was because it was no longer possible to carry out the compulsory attendance provision. The contributions of the guilds also disappeared.

After compulsory attendance upon the public schools was instituted throughout all Germany, it was believed that the Sunday schools could be

[1] *Aufwendungen für die Städtischen Fortbildungsanstalten*, p. 30.

[2] See Grumbach, *Die Entwicklung des berlinischen Fortbildungsschulwesens*, p. 28.

dispensed with; that from then on the required education would be adequate to meet the necessities of the trade and the farming classes. The regulations governing Sunday continuation schools in some States, for example in Baden, were formally abolished; and in others, for example in Prussia, they were no longer enforced. This hope proved to be as erroneous as the one that the communities would voluntarily maintain such schools.

Pache sums up the situation prevailing in Germany during the period prior to the "Seventies" in the following words:

> By the introduction of the *Gewerbefreiheit* (freedom in trade), the power of the guilds was broken; hence the Sunday schools supported by them lost prestige or disappeared altogether, so that the German continuation school system, in so far as one may speak of it by that title, enjoyed only a troubled existence up to the "Eighties."

III

INDUSTRIAL AND COMMERCIAL SCHOOLS SINCE THE FOUNDING OF THE EMPIRE

1. Transition to a New Era. Many signs indicate that just at the time of the re-forming of the German Empire, life was reawakened in the industrial schools. The number of laws dealing with the industrial school question is exceptionally large. The mass of material written on this subject in the "Seventies" shows an extraordinary growth. The statistics dealing with the schools that were founded in that decade indicate that the industrial and commercial education was looked at no longer as an experiment. The long period of private enterprise, and the social work performed by societies, guilds, and self-sacrificing individuals began to bear rich fruitage. The governments of the several States, which up to this time had taken no decisive position, began now to look upon these schools as a means of raising the social and economic power of the Nation.[1]

[1] Until the middle of the nineteenth century, and even two decades beyond, the State governments showed an exceedingly weak initiative in this field of education.—Siercks, *Das deutsche Fortbildungsschulwesen*, p. 23.

The opening of commercial schools followed close upon the establishment of trade schools. In the previous chapter we have seen that before the year 1870, bookkeeping was nearly always introduced as a special branch as soon as the continuation school took on the character of a trade school. Additional commercial subjects followed with advancing development. We note further that legislation after 1870 takes cognizance in like manner of the necessities of both commercial and industrial education.

The founding of these schools and the course of their development show in reality a repetition of the history of the trade schools, although perhaps in a lesser degree. The following citations from school men well known in this particular field of education give a clear picture of the whole transition period. For example, Roscher says:

The inventions of the last century gave rise to art, spinning, and weaving, as well as perfecting other industries. Those inventions also created new

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Since the founding of the Empire, more has in reality been accomplished, than in centuries previous, not only as regards the number of institutions organized but also in the detailed development and scope of their function.—Pache, *Fortbildungsschulwesen*, p. 23.

A marked turning for the better did not set in until the second decade after the founding of the Empire. This was brought about by virtue of the power of the Empire to make the attendance compulsory, also because of a national and economic advance that necessitated a better civic education and made the question of industrial efficiency a live issue.

branches of industry, particularly the building of the steam engines, operators, locomotives, steamships, chemical industries, etc. In mechanical drawing, replacing the earlier perspective art of drawing, an easier method, whereby the measuring was made possible directly, was now introduced. This favored technical progress greatly. Trade freedom placed higher demands on the capacity of the industrial manager and laborer. To meet these qualifications is the purpose of the industrial schools.[1]

From Karl Schröder we read[2]:

Owing to the impressive advances in the field of science, particularly natural science, owing to the manifold inventions, and the perfection of machinery, as well as to industrial exhibitions, which have always enjoyed a large and observing class of visitors, nearly all manufactures have experienced a gigantic growth. Through the railroads and telegraphs, through the banks and credit institutions, as well as through the gradual changes in law, business transactions have advanced so far and become so complicated that even now the knowledge offered and the skill acquired in the elementary schools are absolutely inadequate as a preparation for the independent management of an establishment. It is only necessary to look about observingly in a shop, factory, or trading establishment to be clearly convinced that a tradesman without a thorough equipment of natural and mathematical science, without accuracy and facility in drawing,

[1] Roscher, *Handwörterbuch der Staatswissenshaften*, p. 1088.
[2] Karl Schröder, *Die gewerbliche Fortbildungsschule*, 1871.

and in industrial bookkeeping, is not able to meet the responsibilities of our time.

Experiences and proofs are not wanting which illustrate in the most striking manner the great value of the above described education, or the great disadvantage in its non-possession. In most localities a large number of handicraft workers are not capable of making use of a legible drawing or cost estimate to guide them in their work. A natural result is that much work is not given over to them in the first place, and because they are not able to gauge their own costs to the selling price correctly, they are likely to labor at a loss, or finally to lose out under stress of competition.

Handicraft workers who at the same time manage a little store, are, as a rule, not competent to keep their books in such a condition that they will show a true condition of their possessions.

In another connection the author says, with reference to the necessity of founding industrial continuation schools:

The more important that industry is for a district, the quicker and more zealously must the carrying out of this idea be agitated, if the industrial diligence is to be kept powerful and prosperous, and finally lead to the rise and the extension of the welfare and the culture of the people! It may safely be expected that wherever the industrial continuation schools are properly directed and organized, with competent teachers and suitable equipment, they will bring a blessing to the citizens, and will be industriously and thankfully made use of!

Already for many years the heavy burdens placed upon all phases of industrial life have led numerous industrial leaders and economists to seek the causes of the evils, and to recommend means of relief.

Learned and unlearned, conservatives and progressives, protectionists and free-traders are all agreed that German industry lost many an important position in the great world market, because German wares were far excelled in æsthetic form and in the more effective blending of colors. In addition to this, the English and American goods excel in quality, in service, and in solid construction. For these reasons the home consumer makes use daily of many articles of foreign production. This gloomy outlook, which presents itself unsought on all sides, emphasizes strongly enough "that it is high time that the German tradesman be placed in a position again whereby he may once more compete in the great world market as well as in the small inland trade."

At the present moment those in our midst who are beginning their career as handicraft workers possess neither technical knowledge, a developed taste, nor the necessary commercial preparation. Consequently, our small tradesmen are wanting in all prerequisites necessary to a successful business pursuit. This view shared by the thinking people of all classes, has awakened a general desire for industrial continuation schools, in which the future handicraft worker and small trades people generally may secure such knowledge and discipline, which is not to be obtained in the elementary schools or workshop, and a preparation for an orderly and successful pursuit of their vocation. Discerning friends of humanity, civic organizations, state and local governing

bodies have not only given their attention to this important type of educational institutions, but have voted considerable sums for their erection and support.

All the pressing necessities of our time may be gradually moderated and finally overcome entirely through one means only, *i. e.*, through an increased efficiency of our handicraft classes.

The suggestions which I shall make, in this connection, at the present time, are no Utopian, world-reforming theories, but such as have proved themselves entirely capable of being carried out and brought to a successful issue.

The losses and shortcomings, which I have shown to be a result of our absolutely insufficient vocational training, come to light on all sides in Northern Germany, and I desire through my openly expressed opinion to lend my influence to the end that this dangerous lethargy, which threatens the entire downfall of our already suffering handicraft class, may be overcome.[1]

In 1879, the Society of Diligent Industry drew up the following answer to the question, Are Vocational Schools necessary? "Vocational schools are necessary in order to prepare the student for the extreme specialization of present day industry, and also to give him an opportunity to obtain an all round knowledge and discipline in his chosen work."[2]

[1] Karl Schröder, *Hervorragende Förderungsstätten des deutschen Handwerks*, 1877, pp. 1–4, and 120.

[2] Hermann Grothe, *Die technischen Fachschulen in Europa und Amerika*, p. 11.

2. The Condition of Industrial Schools about 1877. By the following statistics we hope to prove what the above-quoted writers have maintained. We also observe how far North Germany continues behind the South German States.

The Grand Duchy of Hessen had a population of 884,500 and 48 handicraft schools, enrolling 2822 pupils.

The Grand Duchy of Baden with a population of 1,500,000 possessed 40 trade schools, enrolling 6000 pupils.

The Kingdom of Württemberg, the population of which numbered 1,880,000 had 153 industrial continuation schools, enrolling 12,000 pupils.

(In addition to this, all these States have established compulsory attendance upon the general continuation school.)

Consequently the four South German States are represented by a population of 9,264,000 by 500 industrial continuation schools and 39,000 pupils.

Even if we do not go so far as to take the leading State, Württemberg, as a model, but content ourselves with the average of the four Southern States, and compare that average with the situation in Northern Germany, the result reveals an astonishingly unfavorable condition. The Kingdom of Saxony with its population of 2,700,000, would need to show 145 industrial continuation schools, enrolling 11,000 pupils. It had only 22 such schools, enrolling 4900 pupils! The Kingdom of Prussia, having a population of 25,700,000 should have 1400 such schools, enrolling 110,000 pupils. Nevertheless, it had only 213 in-

dustrial continuation schools, and an attendance of 21,724 pupils.[1]

Hamburg, a city of 300,000 inhabitants, constituted an exception. It was a powerful commercial city at the time, and its industrial continuation schools were in a high state of prosperity. In the winter of 1875–76, the enrollment numbered 1564 pupils.

The reasons for the backwardness of Prussia in the founding of industrial schools were these:

In the first place, it was, for the most part, an agricultural State, and the representatives in the governing bodies were mostly the rich landowners of the East Elbe. Fearing a migration to the cities, they opposed industrial schools.

In the second place, Prussia was under the strong political influence of the conservative rule of William I. Concerning this point Professor Gustav von Schmoller wrote in 1881 as follows[2]: "Naturally the political vicissitudes of the State were contributing causes. It was a time in which the opinion held sway that the State should leave all affairs of that kind to private initiative or to local societies."

3. The Development of Commercial Schools. The following tables give a summary of the

[1] Karl Schröder, *Hervorragende Förderungsstätten des deutschen Handwerks*, 1877, p. 115.

[2] Von Schmoller, *Das untere und Mittlere gewerbliche Schulwesen in Preussen*, 1881.

founding and of the distribution of these schools. We see that, in reality, their course of development followed exactly the same path as did that of the trade schools.[1]

	Date of Founding	Number of Schools	
		1880	1896
1. Province of Saxony	1866	4	11
2. " " Silesia	1843	3	55
3. Rhine Province	1883	–	21
4. Province of Hanover	1833	8	14
5. Bavaria	1844	About 8	About 23

The oldest of the commercial continuation schools in Germany is the one in Gotha, which was founded in 1817. The initiative of Gotha was followed, in 1831, by Leipzig, in 1833, by Göttingen, in 1840, by Peine.

In the decades of

1841–1850	there	were	added	9	additional	institutions
1851–1860	"	"	"	17	"	"
1861–1870	"	"	"	17	"	"
1871–1880	"	"	"	35	"	"
1881–1890	"	"	"	79	"	"

Before 1866 Prussia possessed only seven commercial continuation schools. According to estimates from Glasser, there existed 193 commercial continuation schools in Germany in 1893.[2]

[1] *Zeitschrift für das gesamte kaufmännische Unterrichtswesen*, 1900. Marz.

[2] *Kaufmannisches Fortbildungsschulwesen*, 1895. *Bericht von der Handelskammer für das Herzogtum Braunschweig*, p. 12.

In 1893, the representation of the leading German States was as follows:

Bavaria	18	institutions,	enrolling	about	3100	pupils
Saxony	39	"	"	"	3800	"
Grand Duchy of Hessen	6	"	"	"	866	"
Baden	13	"	"	"	1081	"
Prussia	86	"	"	"	7471	"[1]

These tables are interesting from three viewpoints:

1. The great increase is attained in the decade 1870 to 1880.

2. Prussia's representation is disproportionately low when account is taken of the number of her population.

3. The districts that established compulsory attendance have a decidedly larger number of schools and pupils.

Exactly the same observations were made in our survey of the industrial schools.

4. General Survey of the Laws in the Leading States. The most important legal measures for industrial and commercial continuation schools are found in the *Gewerbeordnung* of 1869. Later these were embodied in the laws of the Empire. The chief regulations were as follows:

ART. 120. Employers are obliged to grant the necessary time to all their employees, under eighteen

[1] *Ibid.*

years of age, who may be subject to attendance upon a local or State continuation school. Instruction may be given only at such hours on Sunday as will not interfere with the main church service. . . .

Institutions for domestic science shall also be considered as coming under the above regulations.

Compulsory attendance upon a continuation school may be established by an ordinance of the community or local guild, for boys under eighteen years of age and for girls under the same age if engaged in commercial pursuits. This regulation obtains in so far as compulsory attendance does not already exist by virtue of State law.

By the law of the Empire dated November 27, 1911, the right of compulsory attendance has been extended to apply to girls engaged in industry as well. In order that regular attendance on the part of the pupils may be insured, and the necessary coöperation of the parents may be enlisted, additional ordinances may be drafted by either the community or the guild. Pupils are excused from attendance upon a continuation school, founded by statute, if they are in attendance upon a guild school or other trade school whose curriculum has been credited, by the local authorities, as being equivalent.

ART. 81 b. Guilds are granted the special privilege of establishing institutions for advancing the industrial, technical, and moral development of master workmen, journeymen, and apprentices. The right

to support and supervise these schools falls likewise within their province.

ART. 103 e. Abs. 3. The chambers of trade are empowered to erect and support institutions for the advancement of the industrial, technical, and moral development of master workmen, journeymen, and apprentices.

ART. 127. The master is obliged to keep the apprentice in attendance and to watch over him. He must give the apprentice ample time and opportunity to attend church service on Sundays and holidays.

ART. 127 b. After the period of probation, the apprentice may be dismissed before the term of his apprenticeship expires, if he neglects his school attendance.

ART. 139. Commercial schools established by the State or community under the provisions of this act shall be subject to the regulations that have already been cited for the industrial schools. Merchants shall keep all helpers and apprentices under eighteen years of age in attendance upon the same. . . .

In addition to this Imperial legislation, which confers the right only upon the municipality to establish compulsory attendance, the several States are rapidly developing on their own account, legislation which has for its goal the establishment of compulsory attendance at the continuation schools in the case of all boys and girls, whether they are engaged in commerce or industry or not. We shall now note the special laws of the several States.

(*a*) *Württemberg.* From the enactment of the law of 1836 until 1895, no essential changes were made. By the new ordinances all communities unless adverse conditions make it impracticable, must establish a general continuation school as a substitute for the old-time Sunday school, and the same type of schools may be established for the girls.

The period of instruction shall extend for a period of two years of forty weeks each, and not less than two hours per week shall be devoted to instruction.

In localities in which the general continuation school has not yet been established, the old-time Sunday school is to remain. The period of attendance is to cover three years of forty weeks each, and at least one hour per week is to be set aside for the purpose.

Exemption from attendance upon these schools can be secured only by enrolling in a higher type of school.

According to the law of 1906, each community that has forty male workers under eighteen years of age, who are engaged in industrial or commercial work, must establish an industrial continuation school. (Trade or business school.)

When once such a school has been established, it cannot be closed until the number of pupils has been reduced below thirty, and even then the community may continue such school.

Special commercial schools will be established

when the number of pupils make such a separation possible. We shall reach the conclusion at the instance of tables given later, that the number of commercial schools is still relatively small. The duration of the instruction covers a period of three years of forty weeks each, totalling not less than 280 hours per year.

(*b*) *Bavaria.* The Sunday school law of 1803 is still in force for all boys and girls who have finished the seventh year of the public schools, provided they are not in attendance upon a school of higher rank. The law has undergone various changes since its first enactment. At present, a three-year attendance period of not less than three hours weekly is required.

Since 1870, industrial and commercial schools may be established through local ordinance. They may be organized independently either as a community or guild school or as a private institution. Also, they may be organized in connection with a six-year *Realschule.*

(*c*) *Baden.* Compulsory attendance at continuation schools was introduced by the enactment of the law of 1874. Boys are required to attend for two years, girls for one year. The number of hours devoted to instruction are two weekly throughout the year. However, in special cases the instruction may be confined to the winter months, three hours per week instead of two being the assigned number in such instances.

The law of 1898 provides that all boys engaged

in industry who are not excused from attendance upon the continuation schools, shall attend an industrial or commercial continuation school until they are seventeen years of age.

In 1902, these legal provisions were extended to apply to the girls engaged in industry.

The law of 1904 provided that the attendance upon an industrial and commercial continuation school might, through local ordinance, be made compulsory, for those under eighteen years of age irrespective of sex.

The majority of the schools require an attendance of eight hours per week.

(*d*) *Saxony.* In the Kingdom of Saxony the law of 1873 provides that all boys who have passed the common school age must attend a general continuation school for a period of three years. Furthermore, it empowers the community to extend the same law so that it shall affect in like manner the girls.

The number of weeks per year during which the school is to be in session depends largely on the number of hours per week set apart for instruction. About half the schools are in session two hours per week, the great majority of the remainder offer their facilities for four hours, and a small number give instruction for five hours.

Communities, guilds, etc., may organize industrial and commercial continuation schools. Attendance upon these schools exempts the pupil from enrollment in the above-named class; hence

it may be said, that the latter enjoy a sort of indirect obligatory provision.

(*e*) *Hessen.* By virtue of the law of 1874, each community is obliged to establish a continuation school, which the boys must attend for a period of three years. The number of hours per week is fixed at six. Such institutions may be established for girls, and the attendance made compulsory. Attendance upon an industrial or commercial continuation school relieves the pupil from the obligation of enrolling in a compulsory continuation school.

(*f*) *Prussia.* Energetic measures were drafted in 1874 for the support of the continuation school system. Accordingly, the State pays one-half of all expenses, aside from expenditures for rooms, heat, and light. This obligation is assumed by the State on the condition that attendance has been made compulsory, and that the work is being done according to an approved curriculum.

The most important step looking toward continued development of a favorable character on the part of the industrial and commercial continuation schools occurred in the year 1884. At that time the industrial schools and industrial art schools were put in charge of the Minister of Commerce and Industry.

In 1886, a very unique law was passed for Posen and West Prussia. Here the schools were regarded as a political institution in which sentiments and influences foreign to the interests of the

Fatherland might be crushed on the one hand, and loyalty for a united Germany fostered on the other.

These schools are under the direct supervision of the Minister of Commerce and Industry. It is only by permission of the government that a school may be placed in charge of the district school inspector.

Practically all of the expenses of these Eastern schools are borne by the State.

IV

DISTRIBUTION OF CONTINUATION SCHOOLS FOR BOYS, AND MEANS OF SUPPORT

1. Württemberg. In 1906, there were 176 Sunday schools exclusively for boys and 269 attended by both sexes.[1] Of the general continuation schools, there were 1967 reserved for boys, and 156 to which both sexes were eligible. There were 152 industrial continuation schools with an enrollment of 19,319 pupils.[2] In 1907, there were 153 industrial continuation schools, with an enrollment of 20,873 pupils. Of this number thirty-eight provided for obligatory attendance, and had an enrollment of 3912 pupils. In 1908, the number of commercial continuation schools was eighteen, and of these five were independent (three compulsory, enrolling 1000 pupils, and two voluntary, enrolling 501 pupils) and thirteen combined with the literary school.[3]

The communities have the right, with the con-

[1] Throughout this division the number and the enrollment for separate girls' schools will not be given.

[2] Schilling, *Das deutsche Fortbildungsschulwesen*, p. 168.

[3] *Ibid.*, 1909, pp. 70 and 114.

sent of the *Oberschulbehörde*, to charge a tuition fee, which varies in amount from 1 to 15 Marks per quarter year. The communities must furnish the rooms and equipment. The State pays one-half the actual deficit of the industrial continuation schools, no matter whether tuition is charged or not. In this manner, the State puts a premium on a minimum tuition rate. The State subsidy for the general continuation school is not as liberal, thereby furnishing a constant incentive for changing schools into the industrial type. Should the problem of extraordinary expenses arise (new buildings, etc.), a special agreement between the Royal Commission and the local officials must be reached.

2. Bavaria. In 1904, 120,188 boys were enrolled in the Sunday schools. In addition there were 328 industrial continuation schools, of which 280 were independent, and 48 connected with *Realschulen*. Compulsory attendance was established in the case of 261 by virtue of a local ordinance. The enrollment was 45,202. To these institutions must be added 37 commercial continuation schools, of which 11, enrolling 1024 pupils, were joined with *Realschulen*. Of the remainder, 13 were independent, enrolling 3111 pupils, and 13 were private, enrolling 818 pupils. Industrial societies, guilds, etc., supported 161 schools, which enrolled 8207 boys and 4115 girls.[1]

For the year 1900, the expenses of the industrial

[1] Siercks, *Das deutsche Fortbildungsschulwesen*, p. 167.

and commercial continuation schools, schools for mechanical drawing, and guild schools, had risen to the figures cited below:

Total expenses	686,243 Mk.
Local expenses for heat and light	189,939 "
Expenses of the municipalities	371,521 "
" " " districts	12,959 "
" " " provinces	276,053 "
" " " State	63,380 "
Endowments	55,137 "[1]

Four years later the total expense had risen to 1,035,305 marks.

3. **Baden.** In 1906, there were 1636 general continuation schools, enrolling about 5000 pupils, for the maintenance of which the municipalities were taxed about 200,000 Marks.[2]

The status of the industrial continuation schools, the trade schools, and the commercial continuation schools in the years 1893, 1899, and 1902 is shown in the tables numbered I., II., and III.

In 1906 there were 127 industrial continuation schools, enrolling 2515 pupils and 120 guest pupils.

The total expense of the trade schools for each of these three years was respectively as follows:

1893	305,595 Mks.
1899	421,634 "
1902	522,797 "

In 1906, there were 52 trade schools, enrolling 10,168 boys, 50 girls, and 2170 guest pupils. In

[1] Lexis, iv., p. 106.

[2] Sieroks, *Das deutsche Fortbildungsschulwesen*, p. 167.

that year the total expense of trade schools amounted to 806,500 Marks, of which the State paid 223,700 Marks.

The total expense of the commercial continuation schools for the year 1902–03 amounted to 156,635 Marks. The maximum tuition that may be charged is 24 Marks yearly. The amount of the State's subsidy is determined as follows:[1] "In Baden, the State's support is regulated for those schools joined to a trade school. It consists of a fixed and a variable amount contributed toward the teachers' salaries. The first amounts to 600 Marks yearly and the house rent. The second depends upon the rank of the teacher. It may reach 1700 Marks."

"Trade schools and industrial continuation schools may charge a tuition fee not to exceed 60 pfg. per month."[2] Seventeen schools charged no tuition fee whatever.

TABLE No. I

INDUSTRIAL CONTINUATION SCHOOLS[3]

	Year		
	1893	1899	1902
Number of Schools	44	76	93
" " Teachers	50	105	133
" " Pupils	1,126	1,732	2,121
Amount Contributed by the State	17,275	29,520	36,640

[1] Zolger, *Das kommerzielle Bildungswesen*, p. 34.
[2] See Lexis, iv., p. 190. [3] *Ibid.*, iv., p. 191.

TABLE NO. II

TRADE SCHOOLS[1]

	Year		
	1893	1899	1902
Number of Schools	43	45	46
Number of Pupils:			
Regularly Enrolled	5,520	7,055	8,270
Guests	1,332	1,423	1,474
Number of Teachers:			
Permanent	59	79	99
Temporary	19	32	31
Part-time	32	29	29
Sources of Income:			
State	84,419 Mk.	121,538 Mk.	174,739 Mk.
Municipality	168,478	238,747	299,408
Endowment	7,487	8,020	15,858
Other Resources (Tuition, etc.)	45,211	53,329	62,752

TABLE NO. III

COMMERCIAL CONTINUATION SCHOOLS[2]

	Year		
	1893	1899	1902
Number of Public Schools	15	18	29
With State Subsidy	7	14	25
Without State Subsidy	8	4	4
Amount of State Subsidy	3,900 Mk.	10,160 Mk.	17,650 Mk.

4. Saxony. According to the latest reports the Kingdom of Saxony numbers 1966 general

[1] Lexis, iv., p. 188. [2] *Ibid.*, p. 193.

continuation schools, enrolling 88,583 pupils. Of this number only seven were attended by girls.

The following figures show the status of the industrial continuation schools and the drawing schools.[1]

Year	Number of Schools	Pupils	Total Expense	State Subsidy
1884	22	4,551	62,240 Mk.	12,600 Mk.
1889	27	6,972		
1894	29	7,086		
1899	36	9,019	162,000	40,000
1904	40	9,139	218,630	

These schools defray 39 per cent. of their expenses through tuition.

Relative to the institutions for the training of teachers, Lexis gives the following table:[2]

PUBLIC SCHOOLS

	1884	1889	1894	Higher Commercial Schools 1899	Apprentice Schools 1899	Private Institutions 1899	Total
No. of Schools	25	32	41	4	39	5	48 (1906) 60
No. of Pupils Dept. for Apprentices							
Higher Division	2,539	3,364	4,819	1,041 509	2,693	1,085	54283 (1906) 7,415
Income: (in Mks.) Endowments				6,152	10,193	—	16,345
Contributed by Municipality	4,500	12,500	14,250	16,227	9,695	—	25,922
Tuition	253,415	324,461	422,204	245,770	100,307	25,215	461,292
Total Income			506,365	282,864	229,991	32,032	554,887[3]

[1] Lexis, iv., p. 115.

[2] *Ibid.*, p. 148.

[3] Apparently an error on the part of Lexis, the addition is not true.

5. Prussia. The following perspective shows the growth of the Prussian continuation schools for boys.

Year	Appropriated by the State for the Industrial and Commercial Continuation Schools	Number of Industrial and Commercial Continuation Schools	Number of Pupils of the Industrial and Commercial Continuation Schools
1874	142,150 Mk.	435	37,830
1884	182,000	644	58,371
1894	790,000	899	111,017
1904	2,260,000	1580	203,386
1905	2,480,000		

The earlier figures do not present an accurate picture, because the schools were not properly classified and the figures for many are wanting.

INDUSTRIAL CONTINUATION SCHOOLS

Year	COMPULSORY ATTENDANCE		VOLUNTARY ATTENDANCE		TOTAL	
	No. of Schools	No. of Pupils	No. of Schools	No. of Pupils	No. of Schools	No. of Pupils
1882	335	32,558	288	24,526	623	57,084
1895	472	56,147	289	44,270	761	100,417
1905–06	1,301	202,669	94	23,905	1,395	226,574

NUMBER OF SCHOOLS

Year	INDUSTRIAL SCHOOLS			COMMERCIAL SCHOOLS			Guild Schools and Others
	With Compulsory Attendance.	Without Compulsory Attendance	Total	With Compulsory Attendance	Without Compulsory Attendance	Total	
1904	1,183	107	1,290	221	69	290	428
1905	1,301	94	1,395	254	62	316	423
1906	1,450	85	1,535	276	58	334	409

NUMBER OF PUPILS

Year	IN INDUSTRIAL SCHOOLS			Guild Schools and Others
	With Compulsory Attendance	Without Compulsory Attendance	Total	
1904	174,494	27,222	201,716	28,043
1905	202,669	23,905	226,574	28,124
1906	240,951	20,390	261,341	28,728

NUMBER OF PUPILS IN COMMERCIAL SCHOOLS

Year	With Compulsory Attendance			Without Compulsory Attendance		
	Male	Female	Total	Male	Female	Total
1904			22,603			9,067
1905	27,181	927	28,108	7,208	1,618	8,826
1906	29,954	1,240	31,194	6,655	1,982	8,437

The classification and the amount of the State subsidy are shown in the following tables.

Year	INDUSTRIAL CONTINUATION SCHOOLS			COMMERCIAL CONTINUATION SCHOOLS		
	Number of Schools	Number Receiving Subsidy	Amount of Subsidy in Marks	Number of Schools	Number Receiving Subsidy	Amount of Subsidy in Marks
1905	1,345	1,209	1,575,573	316	158	120,921
1906	1,535	1,324	1,875,827	334	179	139,127

Year	GUILD SCHOOLS AND OTHERS			
	Number of Schools	Number Receiving Subsidy	Amount of Subsidy in Marks	Number of Pupils
1902	347	—	—	20,978
1903	362	—	—	22,853
1905	423	89	26,375	—
1906	409	98	25,469	23,728

In 1885, Prussia paid 182,000 Marks for continuation schools; in 1903, 1,925,000 Marks; and in 1906, 2,040,423. These figures are based on an addition of the above tables.

The maximum charge for tuition is 30 Marks per year in the commercial continuation schools, and 10 Marks in the industrial schools. Often the entire instruction is free. The average tuition is 10 Marks for commercial and 6 for the industrial school.

The above tables show that the number of industrial, commercial, and guild schools having compulsory attendance is constantly growing, while the number of those having voluntary attendance is decreasing. The increase is brought about in two ways. In the first place, the majority of the schools recently founded provide for compulsory attendance; in the second place, some of the schools on the voluntary attendance basis have instituted compulsory attendance.

The number of pupils in compulsory schools also shows an extraordinary increase, while the

number in the voluntary attendance list is on the decline. The attendance of girls in the commercial schools constitutes, however, an exception to the latter tendency. Attendance in both classes of schools is on the increase.

6. Summary of the Various Modes of Financial Support. We notice that a slight tuition fee is the rule, and only in a few of the commercial schools, having voluntary attendance,[1] does it reach a point where it operates, perhaps, to keep the poorer pupils from enjoying the advantages of the school.[2]

In the case of all compulsory schools ample provision is made to excuse payment when evi-

[1] Zolger, *Das kommerzielle Bildungswesen*, p. 34. "The cost of tuition varies according to local conditions, and is reckoned according to a variety of standards. Sometimes it is a fixed yearly sum, which is uniform for all grades, or again it may vary according to the grades. Sometimes it is paid each half year, the same rate being paid for all grades or varying according to the number of subjects. Again it is reckoned by the month, computed according to the number of courses, or according to the number enrolled and the hours in attendance."

In Cologne 30 Marks is charged for one subject, and 40 Marks for two or more.

In Magdeburg the tuition is 3 Marks, and in Breslau 10 Marks is charged for the same work.

[2] A rate that is quite customary for commercial continuation schools is 15 to 30 Marks per year. The remaining expense is apportioned to the municipality, chamber of commerce, and State.—See p. 16, *Verwaltungsbericht des Königlichen Preussischen Landesgewerbeamtes.*

dence of inability to pay is presented.[1] It was contended for a long time that the tuition fee must be set aside when attendance becomes compulsory, but that conclusion seems to have been false. Indeed, in many cities, for instance Berlin, the instruction is entirely free. Some few schools are supported wholly by guilds that charge no tuition fee nor receive help from either municipality or State. Such financial independence is a special source of pride.[2]

7. The Results of Compulsory Attendance. The results of compulsory attendance can be seen at a glance from the enrollment in the different States. Practically all the literature of the present day recommends an extension of the system. There are those who contend that a school having voluntary attendance can do better work because

[1] Since 1909, a law has been in effect in Prussia, which provides that the employer must pay the tuition and provide the individual school supplies for his apprentices.

[2] The American visitor, while attending holiday festivities of the various guilds, will wonder at first why so many of the speakers emphasize so strongly the financial independence of the guild. In personal conversation with the members, such visitor will have his attention called repeatedly to the fact that "no tuition is charged, all expenses are paid by the guild. So far we have been able to get along without asking the aid of either city or State, '*Gott sei Dank.*'" The close lines of social stratification are revealed in all this. Every little advantage in financial condition, the holding of an office (though it may pay nothing at all), family standing, etc., are made the most of. Of course, to this must be added that the financial independence of the guilds gives greater freedom in the management of the school.

it has a more select set of pupils, but the experience of many school men and schools seems to have disproved the whole idea. Pache has very concisely presented the argument against it,[1] and one finds the same thoughts repeated frequently in the present-day pamphlets. Nothing is more encouraging than to find that more than 10 per cent. of all those who have finished the compulsory industrial or commercial course still continue their work voluntarily.

[1] The voluntary continuation schools do not have better prepared or more enthusiastic pupils than have the compulsory continuation schools. The voluntary schools are not in a position to make a selection of pupils. On the contrary, like their sister institutions, they are under even greater pressure to open their doors to all kinds of people. It has been pointed out that the voluntary attendance was an evidence of greater ambition, but one forgets that the young people, practically without exception, are compelled to attend the schools by order of their parents, employers, or guilds. "Since 1869, I have been in the continuation school service. Long years of experience with both types of schools enable me to agree with the declaration of many of the most respected in the profession, that the work in the German compulsory continuation schools is pursued with a faithfulness and conscientiousness that will bear every comparison. Furthermore, there rings throughout every German alley, the old complaint that punctuality, regular attendance obtain in few schools having voluntary attendance, and that the success of the work is greatly handicapped thereby."—Pache, *Fortbildungsschulwesen*, book vii., p. 13.

V

CONTINUATION SCHOOLS FOR GIRLS

1. Sketch of Their Historical Development. After the German girl has reached her fourteenth year, her advantages in the way of schooling still fall far behind those offered the boy. The difference in the legal provision for industrial and commercial education in regard to school attendance, length of term, subject matter in the curriculum, amount of money expended by the State, cities, and municipalities is so great that a special subdivision is necessary to set the reader clear with reference to these particulars.

Expressions of the attitude of the public mind as to woman's ability to learn, her fitness for industrial and clerical labor, whether wages should be paid according to sex or in accordance with the amount and the quality of the work performed, and as to whether the sexes should be educated together or separately, form such a large part of the current literature on the subject of the industrial and commercial education of girls that no chapter could be complete without a passing notice of these questions.

As long as the "old time Sunday school" had as its chief aims religion and a review of the public school studies, we find that the girls were accorded like opportunities. The clear-cut example of Bavaria has already been cited. However, we notice that practically the same plan obtains in several other States.

Before the founding of the Empire, efforts to assist the girls were confined to a few of the larger cities and manufacturing districts. We have already called attention to the early movement in Württemberg. In the early part of the previous century a public spirited woman founded the *Zentralfeirertagsschule*,[1] in Bavaria, which had two divisions, an elementary class for the pursuit of general studies, and one that afforded tuition in sewing, spinning, and knitting. This school is said to have been at the height of its prosperity in the Forties.

In the Sixties, schools were established in Leipzig, Dresden, Breslau, Hamburg, and other cities.

2. Present Day Demands. Carl Schröder, in his book *Hervorragende Förderungsstätten des deutschen Handwerks*, published in 1877, advances practically all the arguments for industrial training for girls that are commonly heard even to the present day.

[1] Lexis, p. 365.

At that early date he emphasized the following points:

1. That a better vocational training for women was quite as necessary as for men;
2. That the unfortunate who are thrown on their own resources must be so equipped that they will be able to earn their livelihood;
3. That women must be trained to an appreciation of taste, that they may be in a position to make their work really interesting and financially profitable;
4. That poverty had already brought many to despair and moral ruin.

In spite of this contention, it was not until the last decade that industrial training for girls was seriously considered. Nothing in the whole German school system is more interesting and impressive than the transition favoring a more suitable training for girls.

At present it is becoming more and more obvious that Germany is losing the old conception, which regarded woman as a home worker merely, a subordinate to her husband, a nonentity in the affairs of the practical world, a memorizer of religious dogma, a subject for the imposition of the clergy, and finally an executor of all those duties that no one else would do.

Dr. Kerschensteiner, the celebrated school reformer, calls attention to a great danger in the German economic life, when he says, "in general it

may be said that the public school[1] without the coöperation of the home makes no child industrious, no child moral, no child religious."[2] This is just a typical opinion that is being often repeated to strengthen the cause of training for women in continuation schools.

Despite the fact that woman is being accorded a new position in Germany, there is still a large industrial class where family influence is losing its hold on children,[3] owing to the way in which modern industry has taken both father and mother from the home.[4]

[1] By public school, Dr. Kerschensteiner, refers to the regular eight-year elementary school. He hopes to impress the idea upon the people that girls need a specific training in home making. This notion is in line with the transition to which we have referred above.

[2] Kerschensteiner, *Grundfragen der Schulorganisation*, p. 146.

[3] Conrad, *Politische Oekonomie*, 5. Aufl. ii., Teil., p. 217.

[4] "In consequence of the transformation of our industrial relations and the development of the public life, a man is withdrawn from his family. As a result, the responsibilities of the home, the rearing of the children, fall upon the shoulders of the woman. When one considers that the education of the great majority of the girls of the middle-class, and of the classes still less fortunate, is closed at the fourteenth year, and if one ponders still further that the rearing of girls for housewives in the above-mentioned circles is for the most part very inadequate, then one begins to realize that our young women are not prepared to meet the high responsibilities that the present expects of them.

"When girls strive with all possible means to enter the marriage state, wedlock becomes immoral. Marriage seems then to have become an institution of maintenance. Nothing less than the lowering of that high moral conception of economic work is involved when a girl begins to learn a trade, only after she has

It is the fact that mothers are engaged in work outside the home that has led to the call: "Give to us women the education and opportunity for the expansion of those powers that are founded in our being!"[1]

This is a call[2] which Germany has failed to heed

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given up all hope of marriage, and finally, disappointed and embittered, yields to the pursuit of industry.

"The compulsory continuation school is well suited to lend a helping hand in all directions. The general education will be raised, the home training will be fostered thereby, and the professional training will be anticipated. If girls are taught to prepare themselves for some occupation as a matter of course, then many unfortunate existences will be avoided, and the way prepared for a happy marriage."—Pache, *Fortbildungsschulen*, Band F., p. 33, 1896.

[1] *Ibid.*, p. 145.

[2] "Because of economic necessity, many women have taken up gainful occupations. In an untold number of instances, the pursuit of productive occupations on the part of women is followed only because of the fear of hunger and misery. For this reason, work must seem to them a misfortune, not to say a curse. Hence, we have accomplished a great moral achievement, if we make possible for women the blessings of work in its fullest degree, and prepare them for life's duties by means of a deeper theoretical and more thoroughly practical education. The German people have by no means done their duty in the field of education for girls; in spite of all worthy attempts on the part of several States, *i.e.*, Württemberg and Baden: in spite of the efforts of various German cities, the net status of the continuation schools for girls up to the present hour is one to be ashamed of. In all quarters not even an adequate all-round training in home-keeping subjects is provided for. Under the influence of modern culture, the responsibilities attached to the most simple economic existence have become decidedly more complex. The girl is not prepared to grapple with the increased demands. In consequence of the factory system, in consequence of our active public life, the pros-

entirely too long for her own social and moral best interest.

3. The Necessity of Industrial and Commercial Continuation Schools for Girls from the Standpoint of Statistics. The economic status of a high percentage of women makes it imperative that they be placed in a position to support themselves.

The census of 1907 showed that Germany had 798,000 more females than males; hence it is impossible for all girls to marry. According to Conrad, there were in the year 1895,[1] 4,407,419 unmarried females over seventeen years of age, and 2,157,769 widows. Only 55.8 per cent. of the females over seventeen years of age were married, hence only a little more than half had their natural support.

The census of the years of 1882, 1895, and 1907, as indicated in the table below, shows the necessity of giving the women a vocational training. These figures reveal that the number employed in gainful occupations is steadily increasing, and that the number occupied in trade and commerce is exceptionally high.

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perity of the home depends almost wholly on the wife. We have laid new duties upon the shoulders of the woman, and our people are doing nothing to help her to meet these added obligations. These new demands require a thorough training, which only continuation schools can give."—Pache, *Forthildungsschulwesen*, Band 7, p. 12, 1905.

[1] Figures for 1907 were not available on this point.

	1882	1895	1907
Total number of workers	17.6 Mill	20.7 Mill	26.7 Mill
Men	13.3 "	15.5 "	18.5 "
Women	4.2 "	5.2 "	8.2 "
Women engaged in industry	1.12 "	1.52 "	2.10 "
" " " commerce	298,000	573,000	931,000

Attention has frequently been called to the fact that the increase in the number of women engaged in commerce is limited to those occupying the lower class positions, whereas the number of independent positions for women is declining. This observation is explained by two causes: in the first place women do not have the needed preparation; in the second place, seldom do they devote themselves to one vocation for a lifetime; hence they lack an experience and mastery which only the men attain. Both reasons seem plausible.

4. The Present Status of Industrial Training for Girls. (*a*) *Württemberg.* In 1906, there were 1564 Sunday schools for girls only, which is nine times the number for boys. Of the general continuation schools, the girls had 487, a figure representing about two-sevenths of the number provided for the boys. The number of industrial continuation schools for girls (*i.e.*, female departments of industrial continuation schools) was 15, enrolling 1018 pupils, which is about one-tenth of the number of schools for boys and about one-twentieth the corresponding enrollment. In addi-

tion, there were 32 schools for women (*Frauenarbeitsschulen*) with an enrollment of 6877 pupils.

(*b*) *Bavaria.* In 1904, Bavaria had 164,142 girls enrolled in the Sunday schools, a total representing about forty to fifty thousand more than the number of boys enrolled. This difference in the enrollment is just about the equivalent of the number of boys that were provided for in the industrial continuation schools.

Outside of Munich, Nürnberg, and several other large cities, nothing is done on the part of the State or cities for the industrial and commercial education of girls. Schools supported by trade societies, guilds, etc., had a combined enrollment of a little more than 4000 girls.

Bavaria is still very far behind in the provision of trade school advantages for girls. However, Munich constitutes a distinct exception to the general situation in Bavaria, not so much because of its present accomplishment, as for what it promises to be within the next decade.

In 1895, a new law went into effect. Girls were allowed to take the eighth year in the public school and one year in an industrial continuation school. These two years were to be accepted in lieu of the three years of required attendance upon the Sunday school. At present more than one-third of the girls who complete the seventh grade, take the additional eighth grade, which is soon to be made obligatory upon all.

Nearly one-half of the girls in Munich receive some kind of industrial or commercial instruction subsequent to the public school course. Every indication points to the early establishment of this sort of instruction for all. About 700 to 800 girls are in attendance upon the *Frauenarbeitsschule*, which has a faculty of more than fifty teachers and a great variety of courses.

The City Commercial School for Girls enrolls more than 500 girls. The institution offers an excellent three-year course. The tuition is 18 to 20 Marks per month, but there are about seventy scholarships for needy girls.

(*c*) *Baden.* Since 1891, the continuation school instruction for girls may be supplemented by instruction in domestic science. This must take place through the initiative of the municipality.

The amount of time spent on domestic science shall correspond to that allotted to the regular continuation school work. Besides giving practical guidance, the course shall be planned with due consideration to the local conditions of the municipality. The theoretical instruction shall embrace drawing, household accounting, information as to the construction and the use of living and sleeping rooms, heating and lighting systems, also the best methods of washing, care of clothing, food values, choosing and preserving foods, and finally care of the sick.

The number of girls in one class must not exceed 36. For practice in cooking, they are to be divided into groups of not more than six.

The State pays part of the original expense of installing this instruction.

There are 106 municipalities (figures for 1901) that have availed themselves of this subsidy. The number of girls enrolled was 3225, whereas the entire number attending the continuation schools was 15,305.

The instruction usually is given in the forenoon, and lasts for a period of four hours.[1]

The Woman's Club of Baden has installed the "traveling cooking school" (*Wanderkochkurse*), attendance upon which is voluntary. At present there are 300 such stations. Beside instruction in cooking, the girls are taught hand and machine sewing, tailoring, free-hand and pattern drawing, etc.

In 1906, the commercial schools enrolled 1032 girls. In the same year the trade schools enrolled only 50 girls.

(*d*) *Saxony.* Saxony employs more women in industry in proportion to its population than any other German State, and attempts as little as the least toward fitting women for their work. Very few localities have availed themselves of the right to make compulsory attendance upon the continuation school for a period of two years.

In 1903, the total number of pupils enrolled in the continuation schools for girls was only 2567, an aggregate which was only about $\frac{1}{3}\frac{1}{4}$ of that represented by the enrollment in the continuation schools admitting boys. The entire number of

[1] Lexis, p. 388.

industrial schools exclusively for girls and women was 22, and in an additional 53 both sexes received admission. The entire number of girl pupils, according to the last report, was 3251, of which number 124 were non-residents of Saxony.

Of the 53 schools for both sexes, there are,—

26	for teaching	lace making,	enrolling	1328 girls
2	" "	wicker work,	"	210 "
1	" "	industrial drawing	"	14 "

Of the 22 schools to which only girls are admitted, ten are private institutions, nine are supported by friendly societies, and one, the school for lace making at Schneeberg, is a State institution.

Most of these private schools have a hard struggle for existence. Their equipment is meager, but notwithstanding the dearth of means at hand, they do very good work indeed. Such schools are largely operated by self-sacrificing individuals, who hope that the State will grant a subsidy in the near future, or that the school will be taken over entirely by the State.

Several of the higher school officials expressed themselves to the author as being very anxious to do something later on for the girls, but for the present the boys claim their attention.

(*e*) *Prussia.* Prussia has not yet enacted any legislation on this subject. However, the 120th section of the *Reichsgewerbeordnung* gives the municipalities the power to make attendance upon

a continuation school compulsory for all girls who are employed in commercial work. Up to the present 32 municipalities have made use of this right.[1]

The entire number of schools (commercial, trade, and industrial continuation schools) supported by the State, or subsidized by the State, was in 1907, 114,[2] and the enrollment of girls in these schools was 10,798.[3] To this group must be added, aside from the private schools that will be discussed later, those schools that are supported, or at least subsidized, by the municipalities. The number of such schools could not be ascertained.

As an illustration, let us present the status of Berlin. There are exclusively for girls:

9 city continuation schools with voluntary attendance
1 " cooking school " " "
2 schools supported by friendly societies and a subsidy from the city
2 schools supported by the Chamber of Commerce

Total 14

(*f*) *In the Whole Empire.* According to a written communication from the president of the

[1] Schilling, *Das deutsche Fortbildungsschulwesen*, p. 151.

[2] *Statistisches Jahrbuch für den preussischen Staat*, 1908, p. 193.

[3] A statement in the paper *Die Frau* of December, 1909, gives the information that 2693 girls are in attendance upon compulsory commercial continuation schools in Prussia, whereas the number of boys in the same type of schools reaches 36,847. A State subsidy is granted to 120 industrial continuation schools for girls.

Kaufmännischer Verband für weibliche Angestellte, Miss Agnes Herrman of Berlin, there were in the year 1908, 323 public commercial schools for girls in the whole Empire.

They were:

195 preparatory commercial colleges
70 continuation schools
58 continuation schools with compulsory attendance

The issue of July 7, 1909, of the paper, *Die Zeitschrift für weibliche Handlungsgehilfen*, gives the statistics for the Empire as follows:

If we limit ourselves to the consideration of the clerical help in industry, the office force in bureaus, and clerks in commercial establishments and insurance offices, helpers in the street-cleaning department, hotels and restaurants, we shall find that the following distribution obtains:

	Male	Female
Industry	265,870	53,710
Commerce	452,551	222,220
Insurance	40,055	3,375
Transportation	21,208	4,546
	779,685	283,851
Total in 1895	358,373	94,870

To accommodate 779,685 male workers in industry and commerce more than 500 compulsory

continuation schools are provided, whereas in the case of the female workers provision is made for only 58 compulsory continuation schools. It must be remembered that the figures just cited include all the adults for whom the continuation schools are no longer considered applicable.

In the division "Commerce" the number of "helpers" was estimated as consisting of 232,774 males and 173,611 females.

In view of the fact that so little is done for the further training of the girls, it is but natural that a great number of private schools should have arisen. An investigation conducted in 1906 by the *Kaufmännischer Verband für weibliche Angestellte* showed that in sixty large, medium, and small-sized cities there were 247 private commercial schools (*i.e.*, industrial undertakings of the type just referred to, not charitable institutions, under the auspices of some friendly society). In this total the numerous "small adventure schools" are not included. In the pedagogical circles of the State and the city continuation schools great pressure is brought to bear against these schools on the grounds:

That they are chiefly money-making schemes,

That they have as a rule, poorly qualified teachers,

That the pupils are prepared too hastily and inadequately for the accomplishment of practical work,

That, in consequence, the labor market is flooded with inefficient and cheap labor forces, a condition of things which has the effect of reducing wages.

Finally, it is added, that these schools publish false, or at least highly exaggerated, statements of the results of the work that they perform.

In all these charges, there is indeed some truth. Nevertheless, it cannot be denied that there are among them a great many good schools, which enter into a stimulating and beneficial competition with the State and municipal institutions, and thus act as a constant spur toward more efficient service.

5. Trade Schools for the Furtherance of Home Industry.[1] In general one can say that home industry is losing ground, but in many parts of Germany it still enjoys a prosperous existence,[2] brought about by unique economic and social conditions, and by traditions of long establishment.

The chief reasons for the continuance of this type of industry are the following:

First, there are many wares that can be made by hand only; then the rapid changes in style hinder the

[1] It seemed best to treat this theme in the chapter dealing with girls' schools, inasmuch as the greater number of these trade schools are organized for girls, or at least girls predominate among their pupils.

[2] "Basket making in the district of Aachen, in Grävenwiesbach in lower Taunus, in Bettingen and Daun in the district of Bitburg, in Ruppertshofen in Unterlahnkreise, in Gersfeld in the upper Rhön, in Orsey in the district of Düsseldorf, in Schurgast in the district of Oppeln and in Gehland in the district of Sensberg of East Prussia are all excellent examples."—*Verwaltungsbericht des Königl. Preuss. Landesgewerbeamtes*, 1905, p. 72.

Annaberg and Buchholz in the "Erzgebirge" have a very prosperous trimming and lace industry, whereas the making of children's toys plays a great rôle in "Thüringen."

machine to a certain extent in keeping step with the new demands; and finally, certain wares may be made to order, at times when the workman is not employed at his main trade.

The chief reasons for establishing schools to foster this special form of industry are these:

Among all peoples and nations the economic law of the "greatest gain for the least effort" obtains. There is a tendency to continue doing as has always been done. There is a strong aversion in Germany against wholesale manufacture because the old order and traditions are thereby set aside.[1] But the competition of wholesale production in Germany as well as that of foreign markets are so strong that without these schools many localities would have lost their industry entirely. The schools raise the work to the standard of an art, since only through beauty and never through quantity, can handwork be made to compete with the products of the machine. In many instances these schools offer a means of relief for the poor.[2]

The following will give the enrollment and a more detailed idea of the origin of some of the

[1] For this reason such schools are not to be found in the United States. The various industrial types have no long and well-e tablished traditions; hence there is absent that disinclination against wholesale production, which one finds in Germany. On the contrary, we take a pride in doing things on a large scale. We boast of the "biggest mill," the "biggest factory" in the world.

[2] "The schools for basket making also belong to such a group since most of them are little removed in character from charitable institutions."—Lexis, p. 61.

more important schools. The manufacture of mittens, *Handschufabukation*, is especially important in Prussia. A school, opened for this purpose in Oppeln in 1901, had as pupils in 1904 72 girls. The tuition is free. The girls receive subsidies and premiums for the purpose of buying machines of approved reputation. The city furnishes the rooms and the light; the State and Chamber of Commerce defray the remaining cost.

In 1907, there were in Prussia:

Course in Lace making,	enrolling	57 girls
School for Making embroidery	"	590 "
" " Sewing mittens	"	73 "
" " " neckties	"	37 "
Trimming School	"	15 "

The school for sewing neckties at Neuss was organized in 1894, as a result of the absolute necessity of having better trained women engaged in this line of work. The old method, in the pursuit of which the girls were taught by the older women, no longer rendered those who had enjoyed such training competent for the work to be done, nor capable of earning a living wage.[1]

The course consumes two years. No tuition is charged; on the contrary, in the completing year the girls are partly paid for their work. The school is supported by subsidies provided by the State, manufacturers, friendly societies, the city, and the Chamber of Commerce. Girls are assisted

[1] *Verwaltungsbericht des Königl. Preuss. Landesgewerbeamts*, 1907, p. 100.

also in securing machines. For a time the State aid was withheld because the manufacturers no longer continued their contributions. The State pursues an excellent policy in securing the co-operation of all parties interested.

The decline of the once prosperous hat manufacture in Luckenwalde led to the establishment of a school, whereby the depleted ranks of women skilled in the art of trimming might be refilled. The manufacturers' association pays all expenses that are not met by the 1000 Marks which the State contributes annually, plus the 200 Marks that are set aside for this purpose each year by the city.

In Saxony the cities of Annaberg and Buchholz occupy a unique position, because of the powerful hold which *Hausindustrie* has in that region. Thousands upon thousands of women and children are employed in making lace and trimmings. In summer, when wages are too low, they abandon their work to labor in the fields or hunt berries. But the long established traditions of this region and the marvelous skill acquired through generations coupled with low wages, has given the community practically a world monopoly. However, some years ago it was felt that these industries should receive the assistance of a school, where the pattern workers could learn more exactly and quickly the demands of the world. Hence a school was established. Recently a new school was installed. However, up to the present, only about

80 girls study in these schools. These are employed afterward for the most part in making patterns. So the school may be looked upon as a director of the whole industry.

6. **Compulsory Continuation Schools for Girls.** The necessity for making the school attendance compulsory is based, according to Behrendt, on the following circumstance:

It has been shown that in some localities where compulsory attendance upon commercial schools has been established in the case of boys by local ordinance, certain employers attempt to substitute for male help, female workers, because the latter are not subject to the onerous requirement of attending school.[1]

Practically the same reports are made by the *Kaufmännischer Verband für weibliche Angestellte.*[1] The *Deutscher Verband kaufmännischer Vereine* to which more than one hundred commercial clubs of Germany belong, made the following declaration in 1902 at one of the sessions in Cassel:

Inefficient educational preparation for a commercial pursuit and the want of practical training are the main reasons why the wages for girls taking commercial positions are so low. In the interest of the female,

[1] Behrent, *Gründung, Einrichtung, und Verwaltung von obligatorischen kaufmännischen Fortbildungsschulen*, 1905, No. 3, p. 7.

[1] Compare *Schriften des kaufmannischen Verbandes für weibliche Angestellte*, 1905, No. 3, p. 7.

as well as in that of the male helpers, attendance upon a commercial continuation school should be made compulsory.[1]

The educational requirements for entrance upon commercial work should be the same in the case of both sexes. Such a provision will lead to the full recognition of the worth of woman's work. She will then no longer be looked upon as a depressor of wages. . . . Through the establishment of the compulsory continuation school for girls a stride will have been taken toward the solution of the whole question, "Women in Industry." [2]

German commerce could not do without the work of women. At the present day it is no longer a question for debate whether woman's work is to have just consideration, whether it is to be tolerated or not, whether woman is to be permitted to become a mechanical operative, or whether she is to be trained to become an intelligent companion worker who knows how to put her activities in right relations with the whole economic life.

Germany is called upon to keep herself capable of competition in all fields through high-grade work. Serious results must necessarily follow if Germany should neglect to prepare her 120,000 women helpers, who constitute nearly one-quarter of her

[1] *Schriften des kaufmännischen Verbandes für weibliche Angestellte*, p. 9.

[2] Agnes Herrmann, *Der Stand des kaufmännischen Unterrichtswesen für weibliche Angestellte*, 1905, pp. 84 and 87.

workers, to meet the responsibilities which life places upon them.[1]

The typical demand received by the *Kaufmännischer Verband für weibliche Angestellte* is for a young woman who has had a good theoretical training. Wholly untrained, so-called apprentice girls are rarely wanted nowadays.[2]

It is also argued that compulsory attendance will better the moral conditions, a contention which seems quite reasonable. Much is also said as to the increased culture and independence that would result through a further extension of the compulsory continuation schools.

Much discussion takes place about the harmful results of the "Pressen,"[3] but about the only remedy for this alleged evil would be obligatory attendance. We have already shown that diurnal instruction for boys did not succeed well as long as the schools were voluntary. The girls' schools are experiencing a similar difficulty.

The compulsory attendance idea is slowly gaining ground. One finds that the leading school men and women are practically a unit in believing that like opportunities should be afforded girls as well as boys. But the masses are not convinced as yet. The movement is also opposed vigorously by

[1] In the year 1907, as we have noted before, there were already 173,611 women employed in commerce alone. (See page 102.)

[2] *Zeitschrift für das kaufmännische Unterrichtswesen*, July, 1907, p. 117.

[3] Commercial schools that are purely financial enterprises.

many large corporations, apparently on the ground that the taxes will be too high, but, in reality, these corporations only desire to practice a kind of exploitation of the youth, regardless of social and moral consequences.

Taken all in all, the whole school development for girls promises a repetition of the battles that marked the history of the growth of the boys' schools. Girls' schools are a whole generation behind the boys' schools, but are gradually passing through the same stages through which the latter have progressed.

Traveling from city to city with a view to studying the school situation, one finds that girls are not debarred from continuation schools because of inability to pay the tuition (provided there is a school in the town at all), as tuition is quite generally remitted when pupils are unable to pay. The chief difficulties that girls encounter, in addition to those already mentioned, are these:

> In the first place, the employer will not let them have the time, and in the second place, parents do not realize the necessity of giving girls an opportunity for further study. The first objection is based on selfishness, and the second on ignorance. In order to help girls conquer these difficulties, laws must be passed bringing the girls into the schoolroom, as has been done to such a large extent in the case of boys.

7. Co-Education. In 1907, co-education existed in eleven commercial schools, which were

supported by the city or by Chambers of Commerce, and in twenty-one continuation schools, which were also maintained in part by the municipality or Chamber of Commerce.

Frau Wäscher of Cassel made a careful study of the results of co-education in continuation, trade, and commercial schools. A portion of her report follows:

To the question, "For what reason was co-education introduced?" most of the answers stated that "economy" was the chief consideration, or that it was the only means by which such a course of instruction could possibly be secured for the girls. In Mannheim the experiment was made at the instigation of the city government; in Freiburg, because beneficial results were expected in matters of industry and conduct, a result which was really achieved.

To the second question, "Is the unequal preparation of boys, on the one hand, and girls, on the other, a hindrance to instructing the two sexes together?" the answer was universally in the negative, Mannheim was an exception, for there the difference in modern language training favored boys. The girls came from the public school, the boys from the *Realschule*. Moreover, the difference in preparation among the boys themselves was pointed out as a problem that was equally in need of attention.

To the third question, "What experience have you had with reference to the ability of the two sexes in mastering the material offered for instruction?" the answers were so widely divergent that it was evident that not the sex, but the individual, was the deciding

factor. Especially was the industry of the girls praised. An exact comparison is not possible here, because in so many cases the attendance of the girls was voluntary, and that of the boys compulsory.

A fourth question relates to the influence of co-education on (*a*) character building; (*b*) morals; (*c*) ambition to learn, and (*d*) discipline. The answers, with one exception, are favorable throughout.

To the question, "Are men or women to be preferred as teachers for the mixed classes?" there is no unanimous agreement favoring men. These are some of the answers: "Up to the present time men only have been available, hence we have no opportunity to make a comparison." "Typewriting was taught by a woman, and no complaints were made." "It depends upon the personality; in general, probably men are to be preferred."

Also to the question, "What results have been noted when co-education did not begin in youth?" nothing disadvantageous was brought to light.

To another question, "Do you recommend educating the sexes together, even when conditions make a division possible?" various individuals answer that in such cases they would separate the sexes. Others, on the contrary, replied that for voluntary attendance they would recommend co-education, but in the case of compulsory attendance they would prefer to teach the sexes separately.

To the next question, "Are your teachers men or women?" the answers show that nearly all full- and part-time teachers are men, with the exception of a language teacher, a commercial teacher, and three part-time teachers in science.

To the last question, "What previous schooling

have the pupils had?" the answers show that the continuation schools are recruited from all schools,—public schools, middle schools, and higher girls' schools.

If one summarizes the results of experiences thus far attained, we find, in the first place, that co-education with only one exception has shown no disadvantages; and in the second place, that no special difficulties have presented themselves because of difference in education, or because of differences in ability to master the material to be learned.

From the above report we see that the results were not unfavorable in the limited extent to which co-education has been tried in Germany. The facts brought out in Frau Wäscher's report have furthermore been substantiated by other investigators who studied individual schools rather than the whole list.[1]

In the *Woche*, No. 18, May, 1909, is an article by Wychgram concerning co-education. The "Oberschulrat" reporting on the admittance of girls as guest students to the boys' classes states:

The results in general are quite good. The ability of the girls to meet the demands of the courses was proven. In many cases, indeed, greater industry and

[1] Agnes Herrmann, *Der Stand des kaufmännischen Unterrichtswesen für weibliche Angestellte*, 1905, p. 81.

Also, Eva von Roy, *Berichte des deutschen Verbandes für das kaufmännische Unterrichtswesens*, p. 55.

a more lively interest on the part of the girls was noted; also their presence seems to have had a stimulating effect on the boys. The greater punctuality, love of order, and deeper conscientiousness on the part of the girls had a favorable influence on the conduct of the boys.

The growth of co-education will be slow in Germany, because prejudice against it is very deep indeed. Before it can gain any great headway, the whole status of women will have to rise, and such a rise to become practicable involves a change in national ideals. Despite all this, financial necessity will compel the introduction of co-education in smaller cities where there are only enough members of both sexes combined to constitute one class. The more completely the schools adopt compulsory attendance, the stronger will become this force in its operation. The report cited shows that in several instances this was the case.

Other conditions will arise which may very possibly make it necessary to teach boys and girls jointly. We have noted the rapid increase in the number of women entering the business world.[1] They are away from home more now than ever before; hence there is much greater need that they be able to protect themselves against men. The capacity for so protecting themselves, can be most readily acquired through co-education.

[1] Eva von Roy, *Kaufmännisches Unterrichtswesen für weibliche Angestellte. Bericht des deutschen Verbandes für das kaufmannische Unterrichtswesen*, p. 52, 53.

That immorality in German cities is increasing is conceded. One reads and hears much about the bashfulness and sensitiveness of German girls who go into the offices and stores, and it is well known that a large percentage of the young men treat the girls with a certain air of haughtiness. The man assumes a condescending attitude toward the office girl, especially when he occupies a higher position, whereas the situation demands instead true comradeship and co-operation. Such conduct can be witnessed in the daily life of Germany. For this condition of things co-education offers one of the best solutions, but it will have to be a different kind of co-education from that at present obtaining.

Some advocate the confining of co-education to the continuation schools. But to bring boys and girls together for the first time after their fourteenth year and then only in the classroom for periods totaling six or eight hours per week—an arrangement that affords the two sexes no chance to play together under any kind of supervision,—is not likely to do much toward bringing about the high aim so much desired. Then again what is called co-education in Germany is in reality only a mixed class, and differs widely from co-education in the United States.

In order to get the highest results from co-education, the German school discipline would, as a first step, have to become more democratic. There would have to be fewer rules and more self-

government. Even in the case of the mixed schools (so-called co-education), it is universally the rule to have the boys and girls come in and go out at separate doors; when only one door is provided, one sex goes out *in toto* before the other is permitted to leave the room. The seating is arranged so that one sex is in the front part of the room and the other in the rear, with an empty row of seats between whenever possible. On the playground the sexes are again separated. In fact, the idea that these little people should be taught by example how to deal with one another plays a small part in the curriculum. Instead of doing everything to minimize the consciousness that there are in the room two sexes, the whole arrangement and procedure from the beginning of the school to its close constantly keeps it alive. No wonder grave results are feared when the age of adolescence is reached!

If at each intermission the teacher would play some little game with the boys and girls, instead of standing aloof in characteristic manner, a healthy moral growth and independence for both sexes would at once begin. The game brings up many little discussions of right and wrong, and offers opportunities to show fair play, honesty, etc. By taking a part in their play, the teacher has a great chance to build character, to show the boys how to be truly gallant to the little girls, and at the same time to inculcate in the girls by actual example a recognition of the way they should be

treated by the boys. Instead of growing apart, the two sexes would learn to have confidence in one another, a regard for the rights of others, and would come to see the true way to enjoy all that is best and noblest in comradeship. Children thus trained are fully prepared for co-education in the continuation schools without occasioning those fears about morality regarding which one hears so much.

To be sure, co-education could not be carried out completely in continuation schools, because the trades bring about a division. But the idea could be firmly established that it was the vocation and not the sex that made the class division. That the German school system will have to do more than it now does for the strengthening of morals is pretty clear. The conditions prevailing are not normal, and especially is this true of the cities.

Co-education is one of the greatest elements of strength in the American school system. It is sometimes reported that co-education is failing in the United States, but the reports of the Commissioner of Education show a rapid increase in co-educational schools from 1870 up to the present date. It is true, however, that in some secondary schools and colleges, there is serious discussion as to the advisability of co-education. Such discussion has, however, always obtained and presents no anomaly. There are certain classes of schools in which the institution of co-education would be a dangerous policy, and in some schools where co-

education is in force it occasions more or less trouble. In schools catering to pupils who have been indulged all their life, where smoking and drinking is quite general among students and faculty, co-education begins to break down. It is very interesting to note that in the schools of the United States having co-education, and incidentally, maintaining on the part of both students and faculty a strong sentiment against tobacco and drink the best standard of morals prevails. Germany could profit too by observing the beneficent results of this concomitant of co-education.

VI

TRADE SCHOOLS

1. **Characteristics and Distribution of this Type of School.** The trade schools, distinct from the industrial continuation school on the one hand and the technical high school on the other, may be divided into two general types. The higher of these is called the middle trade school, *Mittlere Fachschule*, established for the purpose of training those foremen of the larger manufacturing plants and the employers and higher officials of the smaller factories who may wish to understand and to pursue the latest advances in technique independently. The entrance requirements for a school of this class correspond to those of the one-year voluntary military service of the Empire. This is equivalent to the completion of the sixth year's work in a *Gymnasien* or *Realschule*. Thus, including the three years, from the ages six to nine, spent at the preparatory school, pupils have about nine years of schooling before being enrolled in a middle trade school. In addition, it is usual to require one or two years of practical experience in a trade. The advancement from one

class to the next can only take place after the work of the preceding class has been done satisfactorily. The course requires the full time of the pupil for two or three years. The completion of the whole course prepares for entrance upon a high school, *Hochschule*, which is equivalent in rank to a University.

The lower of these two types is called the lower trade school, *Die Niedere Fachschule*, and its purpose is to prepare work-masters of large factories and independent managers of smaller concerns. The conditions of admittance are: first, a good public school education; second, special aptness in arithmetic and drawing; and third, practical experience and such training as is offered in the industrial continuation school.

The instruction is sometimes practical, sometimes theoretical. The principles of mathematics, natural science, and the technology of the special branch under consideration, with special stress upon technical drawing, are always kept in the foreground. In details, however, the curricula differ widely. These are conditional on the duration of the school term, which is partly taken in the form of practical work, and partly on the goals to be attained, which vary widely according to the different degrees of efficiency required. Whereas a part of the lower trade schools give a two-year course, completion of which prepares for the middle trade schools, others have no other pretension than to give a thorough training for

an industrial worker (*e. g.*, many textile trade schools).[1]

The tables shown on the following page give a survey of the industrial trade schools in Germany:[2]

2. Attendance and Growth in the Leading States. (*a*) *In Prussia.* (1) *Schools for Building Trades.* The twenty-five schools for building trades had in 1910 an enrollment of 5650 students. In 1891, there were ten schools; the subsequent growth therefore shows an increase of about 150% in nine years. In 1893, 2050 applications for enrollment were rejected because the schools were crowded. In 1904, 381 applications were rejected for the same reason.[3]

The expenses for the year 1908 were 2,480,693 Marks. The expenses of the State, after deducting the income of the institution, amounted to 1,541,758 Marks, and the subsidy of the municipalities amounted to 313,060 Marks.[4] These figures show the following increase since 1891:

For the State.....500%
" " municipality.....375%
On account of tuition.....200%

(2) *Trade Schools for Metal Workers.* In 1891, there were nine, of which four were private. In

[1] Lexis, *Das technische Unterrichtswesen*, iv., p. 8.

[2] *Ibid.*, p. 30.

[3] *Verwaltungsbericht des Königl. Preuss. Landesgewerbeamtes*, 1905, p. 297.

[4] *Statistisches Jahrbuch für den Preuss. Staat*, p. 190.

State	MIDDLE SCHOOLS					OTHER SCHOOLS					
	With Several Technical Departments		With One Higher Department of			Schools for Building Trades		Schools for Burmishers	Machinist's Schools		Mining Schools
			Machinist's School		Textile School.						
	Public Institution	Private Institution	Public Institution	Private Institution	Public Institution	Public Institution	Private Institution		Public Institution	Private Institution	
1. Prussia			11		7	22	(2)	(3)	4 (3)	5	53
2. Bavaria	4		1 (4)		1	8 (4)	1 (1)		4 (1)	(1)	
3. Saxony	1		(1)	2	4	9 (1)	1 (1)		4		2
4. Wurttemberg	1		(1)		1	(1)					
5. Baden		1		(1)		1		1	(2)		
6. Hessen		1		(1)		3	(1)		(1)	11	
7. German Empire	10	2	12 10	3 2	13	53 9	8 6	1 3	13 12	13 4	58

State	Trade Schools				Art and Art Industrial Schools	Handicraft Schools	Horse Shoeing Schools	Schools for Navigation	Schools for Inland Navigation	Shipbuilder Schools	Other Trade Schools	
	Metal	Textile	Wood	Pottery								
1. Prussia	5	36	7	3	11	7	47	35	37	1	3	2
2. Bavaria		2	7	2	2	16	7		1		11	4
3. Saxony	3	56	1		3	3			7		23	
4. Wurttemberg	1	5			1							
5. Baden	1		7		2		5		3		1	
6. Hessen		1			4				2		2	
7. German Empire	10	104	24 5	6 2	27	27	61	40	1 52	4	42	9

1906, the number had reached twenty-two, the total expenses of which amounted to 1,508,848 Marks.[1]

Of this sum the State paid	989,511	Mks.
" " " " city paid	233,830	"
" " " " income of the school was	285,447	"
	1,508,788[2]	"

Since 1891, the State's subsidy has increased about 800 per cent., and that of the cities about 300 per cent. The number of students in 1906 exceeded 3000, making an increase of about 300 per cent. since 1891.

(3) *Pottery Schools and Art Industrial Schools.*[3] According to the classification of the *Kgl. Preuss. Landesgewerbeamt*, these schools may be grouped, from the viewpoint of the financial support they receive, into three classes:

First, those supported by the State alone:

In 1907, there were six of this type, the total expense of which amounted to 342,545 Marks. Of this amount the State paid 263,322 Marks. This contribution represents an increase of 110 per cent. in the amount of the State's appropria-

[1] *Verwaltungsbericht des Königl. Preuss. Landesgewerbeamtes*, 1907, pp. 305, 306, 307.

[2] The difference of 50 Marks seems to be a misprint in the report of the "Kgl. höh. Maschinenbauschule" of Einbeck.

[3] *Verwaltungsbericht des Königl. Preuss. Landesgewerbeamtes*, 1905 and 1907. Also, Lexis, *Der mittlere und niedere Fachunterricht*, p. 57.

tion. The number of pupils enrolled in the winter of 1906–07 was 840, and 683 in the summer of 1907. The attendance in the last four years has somewhat declined.

Second, those supported by the State and municipalities:

Ten schools had in the year 1907 a total expense of 999,182 Marks. Of this the State paid 454,318 Marks. These sums show an increase of 165 per cent. and 120 per cent. respectively over the amount paid ten years before. The number of students reached approximately 9000, which number had been about constant for the five years previous.

Third, those to which the State grants merely a subsidy:

Seventeen such institutions had in 1907 an expense of 1,415,028 Marks. Of this sum the State paid as subsidy 502,100 Marks.

In 1897, there were only three such institutions, the expense of which amounted to 256,658 Marks. Of this total the State's subsidy amounted to 63,940 Marks. These amounts represent an increase respectively of 450 per cent. and 680 per cent. since 1897.

(4) *Trade Schools for the Textile Industry.* (*a*) *Higher Trade Schools for Textile Industry.* According to the report of the *Landesgewerbeamt* there were in 1905 seven such schools. Their own income amounted to 213,706 Marks, of which 142,204 was expended for tuition, and the remaining 69,800

Marks represented proceeds from the sale of the products of the schools.

The State's subsidy amounted to 304,765 Marks, and the income from other funds reached 175,230 Marks. This shows an increase respectively of 250 per cent. and 280 per cent. since the year 1891.

The number of pupils was:

in 1891..... 884
in 1903.....1231
in 1905.....1062

(*b*) *The Lower Trade Schools for the Textile Industry.* In 1905, there were six[1] such schools. The total income was 12,078 Marks, of which 7245 was derived from tuition fees and 4300 from the proceeds of the products made by the schools.

The subsidy from the State's funds amounted to 68,232 Marks, and out of other funds to 31,802 Marks. Both sums were respectively 3.6 and 4.7 times as large in 1905 as they were in 1891. The number of pupils was:

in 1891.....177
in 1903.....243
in 1905.....273

(*b*) *In Saxony.* The following tables show the growth of the textile, lace and trimming, and building trade schools.[2]

[1] There were eight originally, but two were transformed into schools for domestic science.

[2] *Fünfter Bericht über die gesamten Unterrichts und Erziehungsanstalten im Königreich Sachsen*, p. 83.

	1884	1904
Number of weaving schools	25	21
No. of schools for lace and trimming	2	4
No. of weaving and lace and trimming schools	1	1
	28	26

	1884	1904
Number of pupils	1701	2543
In the day schools	220	436
In the night schools	1481	2107
From Saxony	1599	2442
From other German States	62	37
From foreign countries	40	64

	1884	1904
	Marks.	Marks.
Total expense:	89,400	207,120—112%
Total income:		
1. Tuition	30,023	42,473— 41%
2. Contributions of municipality	11,500	47,754—315%
3. Contributions of those interested	12,500	24,410— 95%
4. Contributions of State	24,400	75,635—210%

Other industrial trade schools:

Year	No. of Schools	No. of Pupils	Expense
1884	20	1325	118,497 Marks
1889	36	2553	
1894	64	4052	
1899	80	5700	387,378 "
1904	98	7976	475,292 "

Schools for building trades:

Year	No. of Schools	No. of Pupils	
1890	5	603	
1904	12	1342	
Increase	140%	123%	

Schools for machinists:

Year	No. of Schools	No. of Pupils	
1890	2	1437	
1904	7	3334	
Increase	250%	130%	

3. Growth as Compared with other Schools. The trade schools of the chief industries of Prussia and of Saxony show a growth that is quite characteristic for all Germany.

The development in these fields is astonishingly great, and it seems even more remarkable when one contrasts the fact that in certain of the learned professions there is a marked decline in the number of students enrolled.[1]

During the last ten or fifteen years, State and municipality have increased their subsidies by

[1] The number of students of theology has decreased by one-half in the period from 1890 to 1905, and the number preparing for the practice of medicine by approximately one-fourth in the same period. On the other hand, the number of law students has doubled in the same time.

several hundred per cent. The total income derived from tuition fees[1] has increased in about the same proportion as has the number of students.

4. Opposition to the Further Extension of these Schools. The rapid increase in the number of workmen who have attended trade schools has called forth the strongest and bitterest opposition on the part of technical industrial officials. In 1904, this opposition crystallized itself into an organization known as *Bund der technisch-industriellen Beamten*, which numbered about 15,000 members. The organization hopes to secure better conditions for its entire membership.

A number of projects are set as goals to be attained, of which the following have the most interest for us:

The organization attempts to influence the legislative bodies of both State and municipality so that for the present no new trade schools will be established, and that the subsidies of those already established will not be increased.

Furthermore, it attempts to bring about a strict supervision of all private trade schools to the end that the number of pupils may be reduced.

[1] The rates of tuition vary greatly. In the sixteen higher textile schools of Germany the charge for tuition is between 30 and 200 Marks yearly for German students. The average is about 125 Marks yearly. For foreign students, it varies from 250 to 1060 Marks yearly. The average is 600 Marks yearly. (Foreigners are not permitted to enroll in some of the German schools.)

The organization strives to disseminate the information that there exists already a proletariat among the technical officials, and that the further fostering of trade schools can only lead to a flooding of the market with skilled workmen, a condition of things which in turn must necessarily lead to a still greater depression of wages.

VII

INTERNAL ORGANIZATION

1. School Buildings and Teaching Apparatus. The provision for suitable buildings is perhaps the most neglected part of the whole school organization. In the villages the public school buildings are about the only ones available, and the same limitation of accommodations obtains, to a very considerable extent, also in the larger cities. As a matter of course, the seating and all other conveniences in such buildings are intended for children under fourteen years, and are wholly inadequate for pupils of the age of those attending the continuation schools. In larger cities, frequently some building is used which was originally constructed for an entirely different purpose. Such building is fitted up as well as possible to meet the emergency of the rapid growth of the continuation school system. The usual result is that the rooms are too small for the size of the class, and particularly unsuitable for proper ventilation, which is a thing much neglected even when the conditions would permit an improvement.

The schools seem fairly well supplied with ap-

paratus, but under crowded conditions the apparatus cannot be spread out properly for effective and convenient use. Schools are found in which one little room is stacked full of models, samples, instruments, and tools of all kinds, which, through lack of sufficient space, lose much of their possible usefulness to the school, and the charm of display which such things offer the pupil when constantly in view. However, every indication points to a great improvement in the near future.

By those connected with nearly every institution visited the writer was told, "You have come to us at a critical time. We are just in the midst of a reorganization, and a new building is now being planned or in process of construction," etc. These assertions were truthful, too. Since the instruction is increasingly being conducted in the daytime, special buildings are necessary.

Munich is in this particular, as well as in many others, one of the most advanced cities. There the buildings more recently constructed are really palaces. The equipment and the apparatus for teaching are complete in every way. Expense has not been spared nor exceptionally high skill been lacking to make everything correspond to the highest ideals of what an industrial school should afford.

It is interesting to note that the example set by Munich is the topic of discussion all over Germany. School authorities in other cities are doing their best to work up popular sentiment in

favor of the school workshop. That all eyes are turned to Munich at present is strongly evinced by the fact that in visiting schools in other cities, one is always asked, "Have you been in Munich? Oh, that you must see!"

2. Curriculum. (*a*) *The Sunday School.* As we have already stated, the Sunday continuation school is a lower form of the general continuation school. A little drill in arithmetic, German, and composition is imparted by the public school teacher, but the most important subject is religion, which is given by the clergy. The whole course is simply a repetition of some of the work of the public school. Children seem to have no especial love for this work, and the consensus of the best opinion is that very little good is accomplished. In many ways one may say that it represents the last stages of the disappearing clerical influence in the public schools.

(*b*) *The General Continuation School.* The curriculum of the general continuation school is generally expected to be more utilitarian than cultural. The hours per year (80 to 240) at the disposal of the school are devoted to such subjects as will meet the local conditions. Arithmetic and German, reading, lettering, and composition always find a place. Drawing is rarely omitted. Those schools having the maximum number of hours add to the curriculum other subjects taught in the public schools or subjects beyond the public

school curriculum. The authorities are guided in their selection by the desire to meet local conditions.

Since 1891, in Baden, instruction in household economics may be instituted for girls.

Württemberg and Bavaria find a place in their curriculum for religion, while Hessen especially provides that no account shall be taken by the teachers of any religious doctrine whatever. In Baden, also, religion does not form part of the curriculum. In Saxony, its adoption is left to the decision of the school board, but reports show that it is not often included.

(*c*) *The Industrial and Commercial Continuation School.* The occupation of the pupil is the central point around which the studies group themselves. Kerschensteiner defined the goal very definitely a decade ago, when he offered the suggestion that the whole continuation school system, wherever possible, should be organized on the principles of practical experience, and that the school workshop should not be an essential element merely, but should be the main feature of the organization.[1]

Though this is now regarded as the ultimate aim of all industrial continuation schools, the financial sacrifice is so great that its complete introduction must take place slowly. Recently, the Ministry of Trade and Commerce in Prussia declared that for financial reasons the "Kerschensteiner system" could not be introduced in Prussia.

[1] Kerschensteiner, *Grundfragen der Schulorganisation.*

The arrangement of the subjects in the curriculum, as indicated by the extract that follows, shows how widely different are the points of view.

Either the occupation is considered basic, as in the widely used plan of the industrial schools in Heide in Holstein, which takes up local occupation and citizenship in the first year, citizenship and the mathematics pertaining to the trade in question in the second year, and the special technique belonging to the handicraft worker in the third year; or we may find an arrangement similar to the one obtaining in the continuation schools in Frankfurt-on-the-Main. The topics considered in the first year are: entrance into vocational life, the workshop, the proper use of materials; in the second year, uses of the apparatus, and the duties of apprentices; in the third year, the topics studied are: the master as independent business manager, the master as a member of the craft, the master as head of the family, municipality, and citizen of the State. Or a third plan may be adopted operative in the continuation schools in Halle. In the first year, those subjects are treated that touch most closely the life of the apprentice. The topics are,—work, choosing an occupation, entrance into a continuation school, apprenticeship, sick insurance, the attributes of an apprentice, the workshop, general information about material. In the second year, the topics embrace,—the journeyman, his rights and duties, his wages, old age and sick insurance, military duty, accident insurance, the employment of the journeyman. In the third year, the topics studied comprise the master, the master as business manager,

the founding and the routine of a business, the laws regulating the trade under question, insurance, the master as merchant, the master as member of a guild, and finally the development of handicraft in Germany.[1]

The larger the city, and the more local the occupation, the greater may be the specialization in the course of study. It is remarkable how closely the subjects taught deal with the direct work of the apprentice. For illustration, there are forty or more different types of arithmetic, bookkeeping, and drawing, each suited to a particular occupation. The skill that the Germans have so uniformly shown in thus applying their knowledge in a manner so practical and serviceable to the trades has won the constant admiration of visitors. The fact that one finds such high class work so widely diffused not only shows that long years have been spent on the system, but also reveals the true strength of the whole.

Religion has been introduced into some of these schools, too; for example in Munich. Its further introduction is being powerfully opposed, however, and the chances of its extension are not encouraging. This is one of the great conflicts raging in Prussia now. If all parties had agreed to give a special place in the curriculum to religion, the continuation school system in Prussia would be much farther along. But the party opposed to Church rule in these schools hopes eventually to see them established without religion as one of the requirements,

[1] Siercks, *Das deutsche Forthildungsschulwesen*, p. 130.

hence the contest and the delay; the moderns have the better prospect of victory.

Several collateral issues receive a great deal of attention in some schools. More and more stress is being put on the so-called training for citizenship. Knowledge alone will not suffice; hence there is a gradual change to what in a narrower sense might be called child welfare work. Among these activities are libraries, children's savings banks, apprenticeship homes, evening entertainments, gymnasiums, and walking tours.[1] Some schools send all their pupils to the theater several times each year, also organize clubs which meet on Sunday for the purpose of innocent amusement and entertainment. The percentage of the whole body that offers such advantages is still small, but it is growing, and the tendency is being most enthusiastically encouraged by some of the leading principals and teachers.

We submit several plans of study as types of those now in vogue.

The following represents a course for mixed trades on a six hour per week basis:

	1st year	2d year	3d year
Trade instruction	1	1	1
German	1	1	1
Arithmetic	2	2	1
Bookkeeping	–	–	1
Drawing	2	2	2
Total	6	6	6

[1] Siercks, *Das deutsche Fortbildungsschulwesen*, p. 111.

The continuation school course in Munich for carpenters and cabinet makers has the following plan:

	HOURS PER WEEK		
	Winter Semester		Summer Semester Classes I to III
	Classes I to III	Class IV	
Religion	1	–	1
Arithmetic and bookkeeping (alternately)	1	1	1
Reading and composition	1	–	1
Citizenship	1	1	1
Drawing:			
(a) Carpenters	6	6	–
(b) Cabinet makers	3	6	5
Practical information about the woods, tools, and machines used in connection with the trade			
(a) Carpenters	2	–	–
(b) Cabinet makers	2	–	–
Total			
(a) Carpenters	12	8	3
(b) Cabinet makers	9	8	9

For the commercial continuation schools, the following is a common type[1]:

	First Year	Second Year	Third Year
German, including correspondence	3	2	1
Commerce	–	–	1
Arithmetic	2	2	2
Bookkeeping	–	1	2
Geography	1	1	–
Total	6	6	6

[1] *Verwaltungsbericht des Konigl. Preuss. Landesgewerbeamtes*, 1907, p. 56.

The commercial continuation schools of Munich provide for the following apportionment of the hours of attendance:

	Preparatory Year	First Year	Second Year	Third Year
Religion	1	1	1	1
Arithmetic	2	2	1	1
Bookkeeping	–	–	1	–
Banking and exchange	–	–	1	–
Business correspondence and reading	3	2	1	1
Commercial geography and the study of materials	1	1	1	2
Hygiene and citizenship	–	1	1	1
Stenography	–	2	2	–
Writing	1	1	1	–
Total	8	10	10	6

The drawing up of a curriculum for a girl's continuation commercial school becomes in certain particulars a difficult task. The first question is: "Shall girls receive exactly the same training that is afforded boys, or shall their womanly characteristics be taken into consideration through the introduction of some studies in domestic science?"

Many leaders of the woman suffrage movement and many commercial teachers champion most enthusiastically the doctrine of equal training for both boys and girls. They claim that household studies are superfluous for the girls of this class, since the girls have learned these subjects in their

homes. Hence each hour devoted to domestic science would only lessen the available time for commercial instruction, and the girls would receive secondary positions in consequence of their less competent training.

The opponents of a purely industrial training for girls, among whom are many important personalities, contradict with great firmness the theory that the women of the present day who are engaged as commercial employees possess sufficient skill in the household arts, but maintain that, on the contrary, these are girls who come from families in which the mother does all the work and never instructs the daughters in domestic pursuits.

We must not overlook the fact that every girl, married or unmarried, now and then finds herself in a position where it becomes necessary for her to engage more or less actively in household work. The objection of shortage of time for studies of this character is met by the suggestion that it would be better to lengthen the course correspondingly, for example, in compulsory continuation schools.

Margarete Henschke points out in her lectures on the organization of continuation schools for girls that a purely commercial training condemns girls to a position of helplessness in the domestic life of the home, a position such as has become proverbial in the case of bachelors and widowers. "To lengthen the course of instruction for this purpose would not be at all impractical," she

argues, "inasmuch as the girls do not, as is the case of the boys, serve one or two years in the army, hence this time might be used for their further training, and thus the girls would suffer no disadvantages as against the boys."[1]

An illustration of the crystallization of this controversy has been furnished by the city of Berlin,[2] which was the first city to avail itself of the rights under the new law, which allows municipalities the right to require compulsory school attendance of all girls under eighteen years of age who are engaged in industry[3] (see page 70).

In the case of commercial students, one and one half hours are deducted from the six hours per week (the usual time allotted in Prussia) for instruction in domestic science; hence, according to the opinion of Fräulein Agnes Herrmann of the *Kaufmännischer Verband für weibliche Angestellte*, the commercial course is cut too short, and the girls must suffer in consequence, as compared with the boys, who receive the full time of six hours. The commercial continuation school can and must furnish adequate commercial training, and for that purpose the customary six hours per week are required and not

[1] Statement made by Fräulein Henschke, principal of the *Victoria-Fortbildungsschule*, a well-known continuation school of Berlin.

[2] This law went into effect Easter, 1913. After the schools are fully developed (in three years, 1916) they will enroll in Berlin alone about 30,000 girls.

[3] The right to enforce a similar attendance upon all girls engaged in commercial work has existed since 1900.

one single hour can be spared. An increase in the number of hours of instruction for the sake of finding a place for domestic science is very difficult to obtain, because the employers are unwilling, as a rule, to grant the added time off.

The female handicraft workers and apprentices having a three-year contract attend the same courses that are given to the boys engaged in the same occupation. These girls are to receive instruction in domestic science only after their number has become large enough for the forming of a class. The tailors, milliners, and laundresses have four hours' vocational instruction and two hours' instruction in household economics. The unskilled workers receive instruction for four hours per week in household economics, and for two hours in technology. This seems to be an admirably arranged course for this class of girls, since trade knowledge would not in any event be of much benefit to them. In general, these girls do not receive instruction in domestic science from their mothers; hence these subjects may be used to great advantage in the schools as a means of cultivating the general intelligence of the pupils.

In some cities, the instruction in domestic science provided for girls engaged in commercial work takes place in the evening, after the close of office hours, in conformity with a plan of increasing the number of hours of instruction without necessitating additional leave of absence from work.

It has been suggested that one day in each week

be set aside for the purposes of instruction, in order that the other days may be unbroken for work.

Another plan that has suggested itself is to devote two and one half years, consisting of six hours of instruction per week, exclusively to commercial studies and to reserve the completing one half year of the three years' course for instruction in domestic science.

Another movement seeks to put domestic science instruction in the eighth grade of all the public schools. This has already been done in Baden and in Bavaria, and it is expected that Oldenburg will soon be added to the list. This plan makes it possible for girls entering upon commercial careers to take the same courses as do the boys.

3. School Hours. (*a*) *Sunday and Evening Hours.* The hours of labor were formerly so long that Sundays and holidays offered about the only available time for the giving of instruction to the pupils of the continuation schools. The employment of these days in this manner was always met by a certain opposition that traced its origin to the feeling that Sunday afternoon should be a time of rest and recreation. Gradually there began to be a substitution to the Sunday forenoon. In South German States the children in attendance on the Sunday and holiday schools (we have already noted that the large majority of the pupils are girls, as other schools have been quite extensively

established for boys) generally pursue in the morning their literary studies under the supervision of the public school teacher and in the afternoon receive their lesson in religion from the pastor. Thus the whole of the day that is normally reserved for rest and recreation is more or less consumed in work, and that is one of the reasons why the children so universally hate it. But as the Sunday and holiday school is gradually being replaced by the general continuation school, as in Württemberg, or the industrial or commercial continuation school, as is becoming more and more the case all over Germany, we notice a decided attempt to abandon Sunday instruction.[1] Altogether, however, as long as the attendance upon some of these later institutions is voluntary, Sunday offers the best time to assemble certain of the pupils, as there are those who, while unwilling to attend an uninteresting church service, yet would be glad to go to a school where they could learn about their trade. In this way Sunday instruction presents a chance to boys to keep from loafing and from worse than wasting their time. The night is, moreover, not considered the best time for instruction. Instances are encountered

[1] Sunday instruction is forbidden according to Sec. 120 of the *Gewerbeordung* of the Empire, when it conflicts with the chief service of the church attended by the pupil; but this law is violated in some cities. It is only one of the many evidences of the fight that is going on at present for more control on the part of the Church, and the resentment of this control by some of the directors and those who wish to separate Church and State.

of schools holding sessions after ten o'clock in the evening. It is no uncommon thing to find some pupils falling asleep in the course of a two-hour session, and this, too, when a visitor is present. Such somnolence has occurred even in classes beginning at seven o'clock in the evening.

(*b*) *Transition to Daytime Instruction during Week.* Daytime instruction during the week is conceded to be the more result-producing; hence, in the compulsory continuation schools the day is being devoted increasingly to instruction.

Hessen led the way in this direction. The law of 1900 prescribed "that the hours of instruction of the continuation schools, in so far as they are not placed in the afternoon, shall be put in the early evening hours and must terminate by seven o'clock at the latest."[1]

In 1906, the law of Württemberg required that the instruction in the industrial continuation schools, in so far as compulsory subjects were concerned, must take place on week days and in the daytime, and that the sessions must close not later than seven in the evening.

The following table shows the distribution of the hours of instruction in the kingdom of Saxony. We note that in the course of fifteen years there is a constant decline in the percentage of hours reserved for instruction on Sundays, whereas there is a marked increase in the number devoted to this purpose on the other days of the week, and partic-

[1] Siercks, *Das deutsche Fortbildungsschulwesen*, p. 88.

ularly noteworthy is the increase in the daytime hours of the week.

	1889	1894	1899	1904
Sundays	36.1	30.1	26.3	23.5
Week day evenings	38.9	40.6	39.6	41.6
Daytime hours	25.0	29.3	34.1	34.3

It is interesting to compare these tables with those summarizing conditions in the industrial continuation schools of Prussia, as indicated in the report of December 1, 1908:

Of the 2169 schools existing at that time,
1075 or 50% had Sunday forenoon instruction.
1396 or 64% " instruction before 8 o'clock in the evening only.
609 or 28% " " after " " " " " also.
64 or 3% " " " " " " " " only.
The number of hours of instruction totaled 60,648.
Of this number,
6,747 or 11% were given on Sunday.
46,455 or 77% " " before 8 o'clock in the evening.
7,446 or 12% " " after " " " " "

The 392 commercial continuation schools of Prussia showed the following on December 1, 1909:

36 or 9% had instruction on Sunday forenoon.
219 or 56% " " before 8 o'clock in evening only.
130 or 38% " " after " " " " also.
38 or 10% " " " " " " only.
The total number of hours of instruction was 14,232.
Of this number,
193 or 1% were given on Sunday.
11,335 or 80 % were given before 8 o'clock in the evening.
2,704 or 19% " " after " " " " "

There are several conditions that still make Sunday and evening instruction practically a necessity.

(*a*) It is often difficult to secure suitable teachers who are free in the daytime.

(*b*) As the school buildings are being used in the daytime for the public schools, the continuation school instruction must be given at other hours, because separate buildings have in many cases thus far not been provided; and finally

(*c*) Unless compulsory attendance is inaugurated, the employer will not always grant the pupil leave of absence during business hours.

Instruction varies also according to the season of the year. In country districts it is held up at times because of the bad weather, and again on account of the gathering of the important crops. In such cases, the schools are in session for a longer period per day during the more suitable school months, when children can the better be spared or when it is easier for them to attend.

The question of hours of instruction has occasioned much controversy up to the present. Every continuation school paper one picks up gives an account of some bitter contest that is going on in some German State, district, or city. Slowly but surely daytime instruction is gaining the ascendency.

VIII

TEACHERS

1. Shall Teachers be Appointed for Full Time or for Part Time; Shall Men of Practical Experience be Appointed as Teachers? At the present time, the most valuable asset of the industrial and commercial continuation schools of Germany is, in the author's opinion, the well-prepared teaching staff. Nevertheless, nothing seems to the school authorities and directors to be of higher concern than the further training of the teachers; and the question ever before them is how is it possible to make the next generation of teachers more efficient than the previous.

The great majority of the teachers in the continuation and industrial schools are at the present day appointed only on a part-time basis. The following table shows the proportion of teachers serving full time and part time in the Kingdom of Saxony during the year 1899.[1]

[1] Lexis, iv., p. 118.

SCHOOLS	Teachers (Total)	Full-Time Teachers	Also Public School Teachers	Engaged in Industry
State Building	49	27	—	—
Textile, etc.	175	—	—	91
Other Trade	363	—	—	140
Industrial Continuation	401	67	—	100
Industrial Drawing	40	—	—	—
Institutions for Women and Girls	143	—	—	—
Commercial	344	120	160	18

The following table taken from *Der Bericht des Landesgewerbeamts*, 1907, p. 60, shows the classification of teachers for Prussia during the years 1904 and 1906.

NUMBER OF TEACHERS IN PRUSSIA

Year	INDUSTRIAL CONTINUATION SCHOOLS			COMMERCIAL CONTINUATION SCHOOLS			GUILD AND FRIENDLY SOCIETY SCHOOLS		
	Full time	Part time	Total	Full time	Part time	Total	Full time	Part time	Total
1904	94	9,624	9,718	64	1,735	1,799	6	1,514	1,520
1906	199	12,161	12,360	138	2,063	2,201	16	1,476	1,492
1908[1]	331	13,712	14,043	206	2,278	2,478	12	1,377	1,389

The rapid increase in the number of teachers appointed for full time is the best evidence of the whole development of this type of schools. The same growth is going on in the other States. In fact, Baden and Württemberg have a higher per-

[1] *Verwaltungsbericht des Königl. Preuss. Landesgewerbeamts*, 1907, p. 60.

centage than has Prussia of teachers who are employed for full time.

Classified according to their previous training or occupation, the teachers thus far have been drawn from the following activities, as the table herewith will show.

YEAR	INDUSTRIAL CONTINUATION SCHOOLS			COMMERCIAL CONTINUATION SCHOOLS			GUILD AND FRIENDLY SCHOOLS		
	Public School Teachers	Handicraft Workers	Other Vocations	Public School Teachers	Engaged in Commerce	Other Vocations	Public School Teachers	Handicraft Workers	Other Vocations
1904	8,532	516	670	1,613	147	39	607	601	222
1906	10,732	644	984	1,907	142	62	507	600	265
1908	12,068	753	1,222	2,287	136	55	469	697	223

Whereas the number of public school teachers and teachers belonging to the handicraft class has increased 25 per cent., the number belonging to other trades (draftsmen, technologists, and engineers) has increased nearly doubly as fast,—an evidence of the ever stronger emphasis which is being laid upon the vocational training.

The constant decline in the number of guild and of society schools for vocational instruction is evidenced by the decrease in the number of teachers employed. The remarkable fact that the number of teachers belonging to the commercial class shows a decline is explained by the supplanting of evening instruction by daytime instruction, hence for many teaching can no longer be carried on in connection with vocational activities.

In the year 1907, in the whole Empire there were 1957 teachers employed in schools conducted by the guilds. Of this number 1221 belonged to the handicraft class.[1]

As we have noted, nearly one-fifth to one-quarter of the commercial and industrial continuation school teachers are engaged in commerce or as handicraft workers. In fact, the percentage employed in the guild schools was about two-thirds of the whole teaching force. There is scarcely anything connected with the whole industrial and commercial school system that strikes a visitor more forcibly than Germany's ability to summon an army of men right out of her trades for the systematic instruction of the boys. To see a blacksmith teach school and to note how well he keeps order, how carefully he does his work, and above all how great is the respect the boys show him cannot fail to interest and impress the American visitor. This applies also to carpenters, locksmiths, barbers, and others. When one reflects carefully on these conditions, one can come to no other conclusion than that they are illustrative of the thorough grounding of German industry and of the careful preparation of her workmen. Fifty years will not suffice to enable the United States to develop an equally high percentage of learned workers, from which to draw at will a similar proportion of capable teachers engaged in the trades.

[1] *Statistisches Jahrbuch für das Deutsche Reich*, 1908, p. 59.

The complaint made in Germany against these teachers is that they are not pedagogically trained. There is much truth in this contention, yet the German is a little inclined to exaggerate its importance. While teachers of this type would be greatly improved by a better pedagogical outfit, due credit is not always given to the fact that in proportion as these men have not acquired a pedagogical routine, they have other points that do much to compensate for the deficiency. First, they are not so absolutely certain about their methods, and a little lack of confidence is often preferable in a teacher than too much. It makes him more receptive to new ideas and suggestions.

Second, these teachers are in closer touch with the practical world and constantly draw on everyday experiences that appeal to the boys. Third, these teachers are more capable than any other type of conveying the idea that it is dignified to labor. Fourth, not inured to routine, they are more resourceful and original. If an idea is original, it is often better than a borrowed one, even though twice as good. Fifth, these teachers do more than any other type to keep up a good feeling between the schools and labor organizations. They are the great medium bond of sympathy.

How very far the United States would be toward the solution of its industrial school problem if it had such a band of teachers to stand between the labor unions on the one hand and the schools on the other!

Herr Schulrat Kerschensteiner of Munich told the author that in general he allowed the labor unions to suggest suitable teachers. These men of practical experience were then pedagogically trained by the directors of the trade schools. Hence we see that the schools are established on a practical basis. By this we do not mean to convey the idea that we should wish the schools to be in the hands of those who had had practical experience only. Dr. V. Seefeld discusses this question quite intelligently:[1]

On first thought, the practically trained man must be accorded an important advantage. The technical knowledge, which the pedagogue must learn through wearisome effort, is the life element of the practical man. In spite of this, men of practical experience are not in a position to satisfy the demands of the continuation school instruction. In classes made up of pupils of various trades, and in the case of unskilled workers, they are not in a position to make use of their technical knowledge. Hence men from the ranks of the pedagogue are indispensable.

It is not true that pedagogues are not in a position to acquire sufficient practical knowledge to enable them to enter the service of a continuation school. Since practical instruction is not attempted in the continuation school, and only a supplementary training is sought in the school workshop, a general technical knowledge is quite sufficient. This pertains especially to the smaller and middle-class schools in

[1] *Zeitschrift für das gesamte Fortbildungsschulwesen*, December, 1909, Heft 3, p. 138.

which the pupils of the various trades mingle, and general instruction takes precedence over specialized. For correct methodical handling of the subject matter and for the cultural tasks of the school, the pedagogues are, on the average, much better prepared than are men who have had only a practical training.

The speaker came to the conclusion that the "pedagogue" and the "practical man" should work side by side.

2. Organization for the Professional Training of Teachers. In Prussia there are no institutions whose special purpose it is to train teachers for the continuation and trade schools. Nevertheless, in the commercial continuation school, as a rule, only such teachers are appointed as have been trained in a commercial high school.

The qualifications demanded for teaching in an industrial continuation school are not quite so high, since a greater latitude must be given to secure teachers for the various special trades. However, there is now on foot a widespread movement which looks toward the establishment of an industrial high school for the training of teachers that shall be equal in rank to that of the commercial high school.

In most cases at the present time, men who have had practical experience are given a pedagogical training by the directors of their schools.

Throughout all Germany, courses extending over four or six weeks, are organized (for the most

part in summer) for the purpose of giving training to teachers of the continuation schools. Among the first and best of this kind of organization are those organized in 1898 in Leipzig and Frankfurt-on-the-Main. The courses offered are given under the auspices of the *Deutscher Verein fur das Fortbildungsschulwesen.*

The plan of work for the year 1908 was in brief as follows:

SCIENTIFIC LECTURES

1. Twelve lectures on social legislation.
2. Twelve lectures on industrial legislation.
3. Twenty-two lectures on economics.
4. Twelve lectures on the history of modern times.
5. Ten lectures on industrial art.
6. Lectures on technology.
7. Seven lectures on the arrangement and management of the workshop for metal workers (demonstrations being given in a workshop of the trade school).
8. Six lectures on the subject of the "continuation schools."
9. Four lectures on the subject of "continuation schools for girls."
10. Seven lectures on trade hygiene.

LECTURES ON METHOD

1. Three lectures on methods in a continuation school.
2. Three lectures on the introduction of practical instruction for metal workers.

3. Two lectures on the introduction of practical instruction for woodworkers.
4. Three lectures on the curriculum for the building trades.
5. Three lectures on the curriculum for classes in mixed trades.
6. Two lectures on the curriculum for classes in baking.
7. Four lectures on industrial art drawing.

PRACTICAL EXPERIENCE

1. Fifteen hours' practice in bookkeeping.
2. Ten hours' practice in calculation.

EXCURSIONS

On two afternoons of each week, industrial establishments are visited in a systematically arranged order.

Evening discussions in the course of which important questions affecting the industrial schools will be debated.

The above plan is of the highest interest to an American teacher, not only because of its contents, but equally so because of its omissions. An American plan for the industrial and commercial training of teachers would take an entirely different direction. (See Chapter XVII, 3*b*.)

Württemberg, Baden, and Bavaria have prescribed a thorough course of seminar training, which is followed by a State examination. In these seminar courses experienced teachers or men

of practical experience (engineers, handicraft workers, or persons engaged in commerce), provided they possess a sufficient degree of literary education, are enrolled.

The course extends over a period from one to three years, according to the candidate's previous preparation and the subjects which he expects to teach.

For the professional training of women teachers, Prussia has established special institutions in Potsdam, Posen, and Rheydt. In addition to these, two well-known private schools, the *Victoria Fortbildungsschule* and the *Lette-Verein*, in Berlin, are authorized to train industrial school teachers.

In the seminars for industrial school teachers, only such women are enrolled as have completed a higher girl's school course, extending over nine years, or can show an equivalent training, and who, after attending the seminar one year, pass an examination as teachers in handwork or household economics.

The one-year course (for most subjects) closes with an examination; but after that, the candidate must have a half-year's practical work in her special subject, and finally a year's trial experience in teaching, before she can be granted full rights as a teacher.

One may attain the right to teach one or more of the following subjects:[1]

[1] *Vorschriften des Ministers für Handel und Gewerbe über die Ausbildung von Gewerbeschul-Lehrerinnen*, vom. 23, January, 1907.

(a) Cooking and household economics.
(b) Handwork and machine sewing.
(c) Laundering.
(d) Tailoring.
(e) Millinery.
(f) Fancy sewing.
(g) Drawing.

For the two subjects last named, the courses in an industrial school seminar extend respectively over a period of two and three years.

Up to the present time, there is for women teachers, no State examination in commercial and continuation schools, neither are there any prescribed courses for their training.

Munich and Karlsruhe have seminars quite similar to those described above for their so-called *Arbeitsleherinnen.*

IX

INTRODUCTION TO THE HISTORY OF THE AMERICAN COMMERCIAL AND INDUSTRIAL SCHOOLS

THE United States may be said to be just now entering upon that period of the establishment at public expense of industrial and commercial schools for the masses which, as we have already observed, was well under way in Germany more than thirty years ago. The first State to inaugurate the movement in America took earnest action in this matter less than eight years ago. Its example has been followed by several other States. The interest in the new educational program is intense, and its discussion finds sympathetic and enthusiastic listeners in large numbers all over the country. The powerful forces now agitating the subject are sure to advance the cause by rapid strides.

The opinion which prevailed before the seventies in Germany, especially in Prussia, that industrial and commercial education were matters of private enterprise or philanthropy held sway in the United States up to the last decade. The development of schools established under the

influence of this idea forms a chapter in itself. This same decade marked the transitional period in German industrial school development which the United States is experiencing at present.

The demand for a school system that would furnish skilled labor for the various and numerous trades of the country was not keenly felt at such an early date in the United States as it was in Germany, because here we have relied upon European countries, particularly Germany, for a large per cent. of our skilled labor. However, in recent years, that source has been greatly reduced. Added to this are the almost unlimited natural resources, the use of the most modern machinery, production on a large scale, etc., that have enabled the United States to play a great rôle in the markets of the world without that well-organized educational equipment which we have found so characteristic of all parts of the German Empire.

New economic and social conditions call for corresponding changes in social organization. We have already noted how new situations manifesting themselves in Germany in the early nineteenth century, were met by gradually changing the old-time Sunday school into one of an industrial character, which later gave off-shoots that grew into the industrial commercial continuation and trade schools of to-day. The same conditions that necessitated industrial education for the masses in Germany have been coming into evidence in the United States with increasing degrees

of intensity from decade to decade; but the resources that answered the appeals from time to time in this country differ widely from those that came to the rescue in Germany.

The means for the founding of the first schools of this kind were derived from a variety of sources and were given under unique conditions. If we classify the schools from these two points of view, namely,—the sources of the means and the motives of the founders,—then we see most clearly how widely different was the situation in the United States as compared with the auspices that called these same institutions into existence in Germany.

X

SCHOOLS ESTABLISHED BY ENDOWMENT[1]

1. New York Trade School.[123] One of the best schools for the building and mechanical trades is the type presented by the New York Trade School, which was founded in 1881 by Colonel Auchmuty, who made a long and careful study of labor and of social problems. He recognized the fact that with the decadence of the apprenticeship system was removed the possibility of securing that thorough and systematic training which enabled young men to become mechanics of the highest skill. As a patriotic American, a sound thinker on social science, and a loving friend of youth, the soul of Colonel Auchmuty was stirred to just indignation at the course of the tyrannical and selfish labor unions, in practically shutting out American boys from the chance of learning trades and in reducing to the lowest point

[1] Throughout part of this chapter the numbers (1), (2) or (3) apply to the following sources of information from which the material regarding the schools was obtained:

(1) *17th Annual Report of the Com. of Labor*, 1902, pp. 24–36.

(2) *8th Annual Report Industrial Education*, pp. 80–83.

(3) Recent catalogues of the schools and letters from the principals.

the opportunities of study as apprentices. Seeing no other way to meet this outrageous assault upon personal liberty, this wrong inflicted on innocent and aspiring lads, he determined to found and maintain, at his own expense if necessary, schools of instruction in which the youths of New York City could learn their trades without interference and with the best advantages. In the face of bitter opposition from the trade unions, the plan was carried out to complete success.

As an aid to meeting these new demands, the founder gave land, building, and equipment, valued at $300,000. The school is supported by tuition fees and by an endowment fund provided by the founder. The charges for tuition in the day classes range from $25 to $40 per term, which extends from October to April. Courses conducted in the evening cost $6 to $16 per term, according to the branches in which the student enrolls. The cost of maintenance for the year 1899 to 1900 was $33,000. There are twenty-eight instructors, all of whom are practical mechanics.

The enrollment for 1899 to 1900 was as follows:

DAY CLASSES		EVENING CLASSES	
Plumbing	118	Plumbing	166
Carpentry	22	Carpentry	21
Electrical work	38	Electrical work	54
Bricklaying	17	Bricklaying and plastering	41
Sign painting	3	Blacksmith's work	19
House and fresco painting	8	Sheet metal and cornice work	38
Sheet metal, and cornice work	4	Steam and hot water fitting	19
Steam and hot water fitting	13	House, fresco, and sign painting	16
		Printing and drawing	30
Total	223	Total	404

Up to the year 1913, 17,598 pupils have attended the school, and for the four years preceding this date the attendance has averaged over 900 students. Each year almost every State in the Union is represented in the day classes. The 1913–14 catalogue states:

> Each year invariably shows an attendance of students from the various provinces of Canada. Within recent years the classes have also attracted young men from the countries of Guatemala, Mexico, Republic of Panama, Germany, Norway, Sweden, Egypt, Liberia (Africa), China, and Japan.

The method of instruction is original with the founder and is said to be unlike anything previously attempted in either America or Europe. The practical and theoretical branches are taught "so that not only skill is quickly acquired but the scientific principles that underlie the work are also studied." Speed is to be acquired after the student leaves school.

The building trades industry in greater New York is said to have derived great benefit from the school, and the standard of intelligence and of efficiency among the working classes generally is said to have been raised thereby.

Labor unions have opposed the school to some extent on the ground that it creates an oversupply of labor. A recent statement from one of the officers of the school reports the attitude of the unions as still unchanged.

2. Pratt Institute.[123] In 1887, Pratt Institute was established by Charles Pratt, who had made a long and careful study of trade schools in both the United States and in Europe. The founder wished to establish an institution in which boys and girls could get such a training as he himself had felt the need of during his own youth. It was his belief that the "existing schools did not give the proper preparation for the life of a great majority of the people, who must needs earn their daily bread through their own toil and skill." The object of the school is "to promote manual and industrial education in science, literature, and art; to inculcate habits of industry and thrift; to foster all that makes for right living and good citizenship, and to aid those who are willing to help themselves."

The total endowment is $3,700,000. The tuition fee in most courses is $15 per term, three terms constituting a year. For evening classes in sewing, basketry, dressmaking, drafting, and millinery the tuition fee is less. The founder doubted the widsom of making the instruction wholly free. On the subject of tuition, Mr. Pratt said:

There is no one subject in connection with this work upon which I have such peculiar feelings as when a poor man comes to pay his hard-earned wages for the education of his child. Instinctively my feeling is to say, "Don't take the money!" but in my cooler and

calmer thoughts, the judgment formed after long and patient study of human nature tells me that it is wiser and better for everyone to pay a part at least of the cost of this education.

The cost of maintenance is $250,000, which sum is derived almost entirely from the endowment.

Of the 128 teachers, 75 are engaged in giving instruction regarding subjects that come within the scope of this study. The number of students enrolled in these departments during the year 1900–1901 was as follows:

	DAY COURSES	EVENING COURSES
Fine Arts	283	220
Domestic Art	464	72
Science and Technology	117	346
Total	864	638

EVENING TECHNICAL		EVENING TRADE	
Physics	24	Carpentry	26
Chemistry	48	Machine work	44
Applied electricity	25	Plumbing	54
Mechanical drawing	59	Sign painting	16
Steam and steam engine	21	Fresco painting	11
Strength of materials	18		
Total	195	Total	151

The following shows the enrollment for the year 1912–13:

SCHOOL	DAY		EVENING		SPECIAL		TOTAL
	Men	Women	Men	Women	Boys	Girls	
Fine and Applied Arts:							
Full Time	227	225					
Part Time	2	57					
	229	282	285	42	51	62	951
Household Science and Arts:							
Full Time		420					
Part Time	1	844					
	1	1,264	5	322	—	80	1,672
Science and Technology:							
Full Time	387	—	943	—	—	—	1,330
Kindergarten Training:							
Full Time	—	70					
Part Time	—	6					
		76			7	10	93
Library Science:							
Full Time	—	28					28
Gymnasium:							
Part Time	—	56	—	75	—	—	131
	617	1,706	1,233	439	58	152	4,205

Total number of day students:

Full Time	1,357	
Part Time	966	
	—	2,323
Total number of evening students		1,672
" " " children		210
		4,205
Students enrolled in more than one course		727
Individuals enrolled		3,478

The influence of this school as exercised through its 40,000 students has been far reaching, especially in creating new standards of social status and elevating public sentiment as to the import-

ance and dignity of manual labor. This achievement far outweighs the personal success of its pupils, though the accomplishments of the latter have been all that could be desired.

The local labor unions opposed the school throughout its earlier history, but now seem to have realized the folly of such an attitude.

3. Baron de Hirsch Trade School.[1 2] In 1891, the Baron de Hirsch Trade School was established in New York City through the munificence of Baron de Hirsch. The object of the school is to aid indigent Hebrews to become self-supporting in as short a time as possible.

Applicants must be in good physical condition and at least sixteen years of age and must be able to speak, read, and write English and be able to prove to the authorities that they have some means of support while attending the school, for only the instruction is furnished free by the school. Preference in admission is made in the following order:

(1) Those born in Russia.
(2) Those born elsewhere in foreign countries.
(3) Those born in the United States of foreign parentage.
(4) Those born in the United States of American parentage.

The combined gifts of Baron de Hirsch amount to $2,400,000, but a large part of this total has

been spent in aiding the education of Hebrews in cities other than New York.

For the class which graduated at the end of January, 1907, there were 702 applicants for admission; of which 189 were admitted on trial and 59 were placed on the waiting list of the next class. About 125 of this number were graduated. Of the class graduating in the summer of 1906, there were 22 machinists, 15 carpenters, 40 electrical workers, 37 plumbers, and 13 painters. The school is now in its twenty-second year, and has enrolled to date 3717, of which 3124 have graduated.

The pupils have done good work as helpers and in a very short time many of them became journeymen. It has been estimated that the average wage for an unskilled worker in New York City is $5.39 weekly. Those who have attended the Hirsch School five and one-half months receive on the average, $7.54 weekly, and there is such a demand for the skilled workmen in the various trades that those who have completed the course in this school receive at the very beginning from $5 to $15 per week.

The trade unions are said to have taken an indifferent attitude toward this school.

4. Williamson Free School of Mechanical Trades.[1 2 3] An entirely different type of school from any of the foregoing was established in 1888

by the will of Isaiah Williamson, a merchant of Philadelphia. In his endowment deed of trust the founder stated that he was convinced that the abandonment of apprenticeship at trades has resulted in many young men growing up in idleness, a condition of things which leads to vice and crime, and is fraught with danger to society. He stated, furthermore, that the main object of his school is to train young men to mechanical trades so that they may earn their own living, and that care should be taken not to educate them to such a point as to make them dissatisfied with their employments. He also directed that all the pupils should be taught to speak the truth at all times and trained to habits of frugality, economy, and industry, and above all fully to realize that any young man who had learned a good mechanical trade and was possessed of the above-mentioned habits was sure to succeed in life. To carry out this program he turned over property valued at more than three million dollars. The benefits offered by the school are secured without any expense no charge being made for board, clothing, or instruction. Pupils must be at least sixteen years and not over eighteen years of age. They must have had an ordinary grammar school education. All pupils are bound over to the trustees by the parents or guardians for a period of three years.

The class of 50 that graduated in the spring of 1907 was divided according to trades as follows:

Bricklayers	10	earning	from	30	to	65c.	per	hour
Carpenters	10	"	"	20	"	40c.	"	"
Stationary engineers	6	"	"	25	"	30c.	"	"
Machinists	14	"	"	22	"	35c.	"	"
Pattern makers	10	"	"	20	"	27½c.	"	"

In all there have been over one thousand pupils attending this school. The 597 graduates are divided as follows: bricklayers, 143; machinists, 170; carpenters, 121; pattern makers, 111; stationary engineers, 52.

The school has no commercial product. From the Massachusetts Industrial Commission report, we read:

Many of the finished articles are given away but most of them are put in the scrap heap and are destroyed. This is one of the reasons why the school is on good terms with the workers in the neighborhood of Philadelphia. It is not a competitor in the market. It is found that the fact that the manufactured object is not kept but is regarded as an exercise does not so influence the workers that they become careless and slipshod in their work.

On this same point the president of the school writes as follows:

We do not refrain from making articles for the market, simply because we do not wish to enter into competition with manufacturers. This has some bearing on the question but the essential item is, that our course would be not nearly as efficient if we

were doing commercial work, as it is on our instructional exercises. Such finished pieces as may be properly included in such a course and which can be used in our place for repairs, are not destroyed.

The fact that finished products are destroyed shows what a great power the unions really have, and that either because of their unreasonableness or else because of the infantile stage in which the regulation of labor matters still finds itself, the institution is forced through expediency to resort to a policy of absolute waste in destroying useful articles.[1]

As far as the United States is concerned in this question, we must note that endowments and State appropriation money are secured without much difficulty; hence there is a certain laxity in the methods of expending sums thus secured.

Special information from the school states: "Ninety-five per cent. of our graduates enter at once on trade work at wages 60 to 100 per cent. of full journeymen's pay, nearly all receiving the latter in less than twelve months." A letter to the author from the president contains these statements:

[1] This same practice of destroying finished products we found in some of the German *Fach* schools. It is one of those difficult problems that future legislation in both countries will have to solve. Until a suitable solution can be found, labor is conciliated by a destruction of the finished product. But that such a solution is only temporary in this modern educational and industrial reorganization is evident.

Our graduates, we are pleased to say, are not only high-grade workmen, but excellent citizens. We have had a number of experts visiting us from Europe, especially from Germany, and they all speak of the work being done here in the highest terms. During the St. Louis Exhibition there was a special representative of the German Government visiting us, who was delighted with what he saw here, and said that he would report to his Government that it was the *only* trade school in America which did work worthy of adoption in his country.

The class of 1910, consisting of fifty-one members, was graduated on March 26th, and within six months after graduation its members were earning an average of $16.60 per week. In answer to an inquiry sent out September 1, 1913, fifty replies were received within one month, showing the following average weekly rate of compensation.[1]

TRADE	Average Weekly Rate of Compensation
Bricklayers	$22.12
Carpenters	19.59
Engineers	13.62
Machinists	16.32
Pattern makers	18.63

The general average within eighteen months after graduation, $18.05, compared to the attainment within six months after graduation, $16.60, shows a gain of about 9 per cent. in one year.

[1] This information was furnished in March, 1914.

The class of 1911, consisting of sixty-five members, was graduated on March 25th. In answer to an inquiry of the following September 1st, the sixty-five replies received within five weeks supplied the following data:

TRADE	Average Weekly Rate of Compensation
Bricklayers	$18.00
Carpenters	15.51
Engineers	14.44
Machinists	15.42
Pattern makers	14.51

The general average was $15.57 a week, notwithstanding the depression of business.

The one hundred and thirteen members of these two classes combined who replied to this inquiry were employed in fifteen different States consisting of the following:

Pennsylvania	Missouri	Virginia
New Jersey	Oregon	Delaware
Kentucky	New York	Tennessee
Illinois	Massachusetts	Nevada
Wisconsin	Kansas	California

and two in Canada. They are located in sixty different cities, towns, etc., and are engaged by eighty-eight different employers.

102 are active in trade work.
7 are occupied at mechanical draughting.
4 after working at their trades for some time, left their employment to enter college, two taking mechanical courses.
2 on account of illness are not engaged in the trade they learned.

Since the first graduation exercises held April 2, 1894, 842 young men have received the Williamson School Diploma, 19 of whom have died. Of the remaining 823, 716 to the writer's knowledge are engaged in mechanical pursuits.

5. California School of Mechanical Arts.[1] [3] "This school is the outcome of the generous public spirit of James Lick, a citizen of California. Hav-

[1] Vol. xvii. *Annual Report of Com. of Labor*, 1902, pp. 70–79.

[3] Note taken from Catalogue of 1913.

"Industrial education in America, being still in the experimental stage, is marked by general misunderstanding and uncertain use of terms. To explain our curriculum, therefore, requires a few preliminary statements. Between the time of James Lick's death (1875) and the opening of the school (1895) the so-called manual training movement had set in and had resulted in the establishment of manual training or polytechnic high schools in many of the principal cities of America. While planning our course of study (in 1894) we have a careful survey of the entire field of industrial education both in America and abroad, with a view to selecting such features as could best be adapted to our special needs and incorporated in a scheme of instruction that would effectively carry out the wishes of the founder of the school, as indicated by the terms of his bequest. At that time we recognized that the prevailing type of manual training high school was not sufficiently practical for our needs, yet up to a certain point it had elements of value, and these we endeavored to embody in our general plan, which was described in our first circular in the following words: Manual-training schools throughout the United States confine themselves to a course that is valued for the general and symmetrical education it affords, rather than for the specific information it imparts, while the question as to what particular pursuit the student is going to follow for a living receives no consideration, this important and critical matter being left to the student's own discretion *after graduation*. It is

ing been brought up in narrow circumstances, earning his living in early manhood as a mechanic, he sympathized with the struggles of the young for a place in life, and resolved to found a school where those dependent upon themselves could receive such education as would give them a foothold in the world." In 1875, Mr. Lick executed a deed of trust which provided $540,000 for the establishment of the California School of Mechanical Arts. Owing to legal complications, the school was not put into operation until 1895.

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our plan to begin with a Preliminary Manual Training Course, and when the student has nearly completed it, to allow him to select one of the Technical Courses in order that he may devote to his chosen field of work his entire time for two years,—making the course four years in all. When the pupils enter the school our first care is to cultivate in them self-reliance and judgment, good tastes, and correct habits of thought and action. This is done as far as possible through the agency of things that will be of service to them in the latter parts of their course or in after-life. Little by little this educational process gives way to the consideration that our social conditions require that every member of the community, if he is to be successful, must know thoroughly some one thing, and the ultimate object of our course is to afford each student an opportunity to acquaint himself with all that pertains to one of several of the most important industrial pursuits. In other words, we begin from the educational or æsthetic side, and end with the practical or labor side.

"At the beginning of the third year any student who has completed the first two years of the Preliminary Course with satisfactory standing may elect one of the Trades or Technical Courses pursuing therein a formal apprenticeship of two years, leading to a diploma of graduation. The Preliminary Course does not end abruptly at the close of the second year, but merges into the apprenticeship courses for about six months.

The school is open, free of a tuition charge, to any boy or girl of the State of California who has completed the eighth grade of the grammar schools.

The school plans to give each student a thorough knowledge of the technique of some one industrial pursuit whereby he can earn a living, and to develop in him a degree of intelligence that will prepare him for the duties of active citizenship.

Up to 1902 the institution had enrolled 2301 students, which number has since then nearly been doubled. The enrollment for 1901–02 was as follows:

"Thus far, during the fifteen years since the school was established, we have not found it necessary to make any radical changes in this fundamental conception of our curriculum. Yet we have held ourselves in readiness at all times to accept any new ideas that might come from the widespread study and investigation in this field, especially during recent years. It is our belief that it should be one of the functions of an endowed school, such as this one is, to do a liberal share of the pioneer work in education, showing the way rather than trailing behind. A vocational trend is undoubtedly the most marked feature of the industrial education movement of the present day, not so much in the direction of the actual teaching of trades, but better described as *pre*-vocational, having in view the propagation of a general industrial intelligence among boys between the ages of 13 or 14 to 17 or 18, when the period of formal apprenticeship usually begins. In time to come this movement may have important consequences in modifying our curriculum, but for the present it confirms us in the course we have pursued and points the way more clearly for improvement in certain details. More and more we find that efficiency in teaching is gained by adhering to the practical viewpoint, even in teaching the so-called cultural subjects, and especially by making the industrial and the academic subjects reinforce each other at every opportunity."

	First Preliminary	Second Preliminary	Junior Apprentice	Senior Apprentice	Ungraded	Visitors	Total
Boys.....	99	38	32	20	85	10	284
Girls.....	33	16	14	6	18	1	88
Total.....	132	54	46	26	103	11	372

The graduates so far have been distributed in the following departments: pattern making, forge work, machine shop, machine drawing, architectural drawing, technical industrial art, technical modeling, technical dressmaking and millinery, industrial chemistry, etc.

6. The Wilmerding School of Industrial Arts. In 1899, the Wilmerding School of Industrial Arts was established at San Francisco, Cal., by the gift of $400,000 contributed by Mr. Wilmerding. The object of the school is "to teach boys trades, fitting them to make a living with their hands, with little study and plenty of work." It is intended that the graduates of the school shall be well-instructed workmen in the trades which they select, and intelligent citizens. The equipment of tools, machinery, and appliances is very complete. The course is designed to cover four years. There is no charge for tuition, the use of tools, instruments, or materials. Any boy who has graduated from the eighth grade of gram-

mar school will be admitted to any department of this school. Boys who have finished only the seventh grade will also be admitted, provided they are over sixteen years of age.

7. The Hebrew Technical Institute. The Hebrew Technical Institute of New York City was established in 1888 in recognition of a particular need that "arose from the fact that the large influx into New York City of Jewish immigrants, for the most part in straitened circumstances, resulted in a heavy strain on the Jewish charitable organizations. It was recognized that in many instances permanent relief for the older immigrants was hopeless, and that sure relief could come only through the proper training of the children." "It was felt that the best way to help the poorer classes was to give the younger members an education in the mechanical trades, and thereby place them in a position to support themselves and those dependent upon them." "Candidates for admission must be of Jewish faith, residents of New York City, at least twelve and one-half years of age, healthy and strong and must present testimonials of scholarship and character." "Tuition, books, and tools are furnished free. Warm lunches are provided at a charge of one cent per day, or five cents per week. Shower baths are furnished free, and bathing forms a regular part of the school exercises." The full course requires three years for completion. The number enrolled

in the different classes in 1901 was as follows: junior class, 91; middle class, 48; senior class, 41. The total number of graduates up to 1913 was 1061. Of the 989 that reported in that year, 728, or 74 per cent., were engaged in mechanical work.

The buildings and equipment are estimated at about $132,000. The annual expense of maintenance is $20,000.

The funds for the buildings and equipment were provided by contributions from members of the Jewish community, and the institution is supported by the annual dues and contributions of two Jewish societies, legacies of deceased members, and proceeds of occasional benefit entertainments.

"The officials feel that the institute has proved eminently satisfactory, and has fully attained the end for which it was established."[1]

The labor union representing the woodworking trade has opposed the institute on the ground that it was turning out too many young men who enter that trade.

8. Miller Manual Labor School.[2] By a bequest of more than $1,000,000 from Samuel Miller, the Miller Manual Labor School of Albemarle County, Crozet, Va., was established for "as many poor orphan children, and other white children whose parents are unable to educate them (such

[1] *17th Annual Report of the Com. of Labor*, 1902, pp. 81–84.
[2] *Ibid.*, pp. 86–89.

orphans and other children to be residents of the county of Albemarle), as the profits and income of the funds herein devised and bequeathed will admit of."

At first only boys were admitted, but since 1884 girls, too, have been admitted. As a rule, the pupils are between the ages of ten and fourteen years. For the year 1900–1901, there were nineteen teachers employed in conducting industrial courses. In the same year there were 40 pupils engaged in woodworking, 24 in the machine shop, 24 in the foundry, 24 in the forge shop, 3 in printing, 3 in the steam and electric plant, 35 in dressmaking, sewing, etc., and 48 in cooking. "The total number of pupils who had entered the school from its organization up to the year 1901 was 1022. Of these the majority remained in the school from four to seven years."

9. Webb's Academy and Home for Shipbuilders. William H. Webb, recollecting the difficulties he had encountered in his youth in learning the art of shipbuilding, endowed an academy for the purpose of teaching this art. The institution provides a home for aged, indigent, or infirm men who have been engaged in shipbuilding, and for their wives and widows; and an academy to "furnish to any young man, a native or a citizen of the United States, who may upon examination prove himself competent, of good character and worthy, free and gratuitous education in the art, science

and profession of shipbuilding, together with board, lodging, and necessary implements and materials while obtaining such education." Candidates for admission must be between the ages of fifteen and twenty years.

The number of pupils in the different classes during the year 1900–1901 was as follows: junior class, 17; middle class, 10; senior class, 11. The cost of maintaining the school alone is $20,000 per annum. The sum total of the gifts bestowed by the donor amounts to nearly $1,000,000.[1]

10. Drexel Institute. In 1891, the Drexel Institute was founded in Philadelphia by Anthony J. Drexel, whose combined gifts amount to $3,000,000. Of this sum, $1,000,000 has been expended upon the buildings, their equipment and appliances. The endowment fund of $2,000,000 is applied to maintaining the instruction.

Mr. Drexel had a strong sympathy for young men and women who, without money, are eager to improve their opportunities in the various industrial occupations. He knew that *skilled* labor was every day increasing in importance and coming more into demand.

Besides large departments in architecture, science, and technology, commerce and finance, domestic science, domestic arts, the Institute offers important educational facilities through its library, museum, and picture gallery, which are

[1] *17th Annual Report of the Com. of Labor*, 1902, pp. 175–180.

open free to the public. The scope of the Institute is wider than that of any other institution in the country. A study of the large catalogue of more than 300 pages reveals the fact that several hundred distinct courses, covering almost every form of instruction in art, science, and industry, are embraced in the curriculum.

The tuition fee is on the whole very low, though in several of the departments it runs as high as $80 per year. As a rule, the completion of a high school course is a necessary qualification for admission. More than 1000 pupils are in constant attendance.

11. Spring Garden Institute.[1] The Spring Garden Institute of Philadelphia was established in 1851 to teach industrial drawing and design. "The special need that led to the establishment of the school was that mechanics were unable to read the drawings of mechanical draftsmen, and it was the opinion of the founders that they could be made more useful to their employers by being trained in the principles of linear representation of objects."

The courses of the school have been elaborated somewhat since its inception. The following table, representing the season 1900–1901, gives the number of pupils then enrolled and the subjects studied in the three-year course.

[1] *17th Annual Report of Com. of Labor*, 1902, pp. 188–192.

PUPILS IN THE SEVERAL CLASSES IN SPRING GARDEN INSTITUTE 1900–1901

COURSES	First Year	Second Year	Third Year	Total
Day School				
Drawing, designing, etc.	11	5	7	23
Mechanical department	25	15	8	48
Electrical department	25	5	—	30
Total, day school	61	25	15	101
Night School				
Free-hand drawing	140	80	60	280
Mechanical drawing	45	45	48	138
Architectural drawing	20	14	10	44
Designing	—	—	15	15
Mechanical department	40	20	15	75
Electrical department	105	25	10	140
Total, night school	350	184	158	692
Total, day and night school	411	209	173	793

The building and equipment cost $200,000. The average cost of maintenance is $16,000 per annum. The Institute derives its income from tuition fees and an endowment fund, which at present amounts to $158,000.

12. General Society of Mechanics and Tradesmen.[1] The General Society of Mechanics and Tradesmen of New York City took up the work of education about the year 1820.

Primarily the school was intended for the gratuitous education of the children of indigent and deceased

[1] *17th Annual Report of Com. of Labor*, 1902, pp. 192–195.

members of the society only, but it grew in such favor that other children were admitted upon payment of a moderate sum for tuition. This plan was successfully continued until the increasing merits of the public free schools rendered it no longer necessary, and in 1858 it was discontinued. In 1859, the society established the present evening school for the purpose of enabling those engaged in daily occupations to acquire gratuitous instruction in free-hand, mechanical, and architectural drawing, modeling in clay, elementary mathematics, and physics. In addition to the regular class work, the pupils have the benefit of technical lectures on subjects pursued in the class room. Tuition is free to any young man sixteen years of age, or over, and of good moral character.

The term begins in September and ends in April. Sessions are held four evenings each week from 7:30 to 9:30 o'clock.

PUPILS IN THE EVENING SCHOOL OF THE GENERAL SOCIETY OF MECHANICS AND TRADESMEN

COURSES	Elementary Class	Advanced Class
Architectural drawing	70	32
Mechanical "	77	20
Free-hand "	66	26
Clay modeling	—	34
Mathematics	—	70
Physics	—	63
Total	213	245

The following table shows the growth of the school during the past five years:

	1908	1909	1910	1911	1912
Number enrolled	2017	2303	2316	2318	2200
Number of instructors	28	31	33	32	32
Number of classes	53	60	60	60	57

Below is tabulated the number of graduates in the several classes of the past decade:

1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
32	46	52	52	47	104	123	142	131	165

making a total of 894 graduates for the period.

The value of the building and of the equipment is estimated at $300,000. The cost of maintenance is about $7500 per annum, and is provided by the society. A large proportion of the pupils are mechanics and apprentices already engaged in work necessitating a knowledge of drawing, and their school training enables them to become more proficient in that requirement.

This school is one of the very few in the United States that offers a fair comparison to similar institutions in Germany. Its history is long enough

to have undergone several transitions and is in some respects identical with that of the German schools inaugurated about the same time. It first educated the poor children, then free public schools rendered it unnecessary for a time, and finally it was reorganized to meet entirely new economic conditions. However, in the fourth point it differs from the German type and development for it illustrates the American trend toward endowment in preference to the securing of State support.

13. Mechanics Institute.[1] The Mechanics Institute, Rochester, N. Y., was founded because good mechanics were lacking in certain industries of that city. When men of high technical skill were needed, it was necessary to send abroad for them, and it was felt that there should be some place near by where apprentices and mechanics and young women, also, could receive such technical instruction as would not only be useful in ordinary branches of industry, but would also result in creating a class of artisans who would compare favorably with the technical experts trained in foreign schools. The Institute was opened in 1885. From that date to 1901, 24,000 pupils had received the instruction it offers. The number of pupils in the different classes during 1901–1902 was as follows:

[1] *17th Annual Report of the Com. of Labor*, 1902, pp. 195–200.

PUPILS IN SELECTED CLASSES OF THE MECHANICS INSTITUTE 1901–1902

COURSES	Day Classes	Evening Classes	Total
Free-hand drawing	45	115	160
Mechanical drawing	19	225	244
Architectural drawing	—	24	24
Ornamental design	21	30	51
Composition and pen and ink drawing	32	20	52
Life class	29	21	50
Painting, oil and water color	52	—	52
Clay modeling	—	17	17
Art history	33	—	33
China decoration	7	—	7
Lettering	—	10	10
Mathematics	—	30	30
Chemistry	—	16	16
Electricity	—	59	59
Steam engineering	—	16	16
Industrial training in wood	—	27	27
Industrial training in iron	—	44	44
Dressmakers' training	14	—	14
Total	252	654	906

The Institute owns $400,000 in property, 75 per cent. of which is devoted to school purposes. The cost of maintaining the entire Institute is about $40,000 per annum, of which 65 per cent. is chargeable to technical training.

14. Cooper Union. This institution differs from the preceding in the scope of its work, as will be seen from the class enrollment, though the spirit of the founder was in exact sympathy with the movement that forms the main consideration of this theme. An immense sum of money was

left to the trustees to provide, (1) instruction in such branches of knowledge as in the opinion of the board of trustees would tend to improve and elevate the working classes of the city of New York, (2) to support and maintain a free reading room, galleries of art, and scientific collections, and (3) to provide a school for the instruction of women in the arts of design. There is no doubt that the fact that the school was established in 1854, when trade training in schools was still practically unheard of in the United States, led to an entirely different interpretation of the founder's wishes than would have been the case had the money been given twenty-five years later.

This school forms a most interesting example, illustrating how school curricula represent the educational ideals of a decade, and in this particular case, the interpretation above referred to forms a landmark by which we are enabled to see how marvelously these ideals have changed in the United States in such a short period of time.

The purpose of the founder is further elucidated by a quotation from his biographer:

Starting in when a boy, Peter Cooper worked at various trades. He mastered them all and eventually became a business man, an inventor, and a successful manufacturer. At every stage of his progress, however, he found himself hindered by a lack of knowledge and education. As an apprentice he regarded with intense sympathy the needs and limitations of the class to which he belonged, and he resolved to do

something for apprentices He was possessed with the desire to found an institution which would supplement the deficiencies of early education, furnish to the virtuous, industrious, and ambitious youths the means of progress, and attract the thoughtless or indolent into the same ascending road.

The amount of the original endowment was more than $1,000,000, but the amounts added by the Cooper family and by Mr. Andrew Carnegie have made the combined sum more than $2,000,000.

The following table will give an idea of the scope of the art and the drawing courses. The day school is exclusively for females, and the evening school exclusively for males, except the classes in perspective and elementary architectural drawing, to which women also are admitted. Tuition is free provided the applicant can give evidence that he is not able to pay for it.[1]

PUPILS IN THE EVENING CLASSES, COOPER UNION

Cast drawing	136
Form drawing	120
Decorative designing	252
Ornamental drawing	200
Rudimental drawing	200
Modeling in clay	90
Mechanical drawing	240
Elementary mechanical drawing	70
Architectural drawing	300
Elementary architectural drawing	200
Perspective drawing	65
Total	1873

[1] *17th Annual Report of Com. of Labor*, pp. 235–242.

PUPILS IN THE DAY CLASSES, COOPER UNION

Elementary cast drawing	77
Drawing from the antique	29
Life drawing	27
Still-life class	20
Portrait class	15
Modeling in clay	17
Design, historic ornament, etc	39
Decorative composition, etc	17
Illustration	27
Retouching, water color, porcelain, etc	24
Total	292

It is estimated that at least 8000 pupils have completed the art courses. The following statement was taken from the 1913 catalogue: "The number of new applications received for admission to the classes before the opening of the last school year, which are outlined below, exceed in total that of any previous year:

Night School of Science	3117
Night School of Art	2178
Day School of Technical Science	525
Woman's Art School	242
School of Stenography and Typewriting for Women	188
School of Telegraphy for Women	55
Debate and Elocution	290
	6595

"In addition to these new applications, there were 1758 students who were either promoted from the classes of the previous year or permitted to repeat classes, making a total demand upon the institution at the beginning of the last school year

amounting to 8353. Of this number it was possible to admit to the classes only a fraction. During the first week of November the enrollment of the individual students was as follows:

Night School of Science	1246
Night School of Art	1187
Day School of Technical Science	264
Woman's Art School	315
School of Stenography and Typewriting for Women	43
School of Telegraphy for Women	25
Debate and Elocution	290
	3370

"Under the first provision of the will, night classes have been organized for working men and women. These classes the past fifty years have been attended by more than 100,000 different persons."

"The free reading room and library are visited by 3000 persons daily."

This institution presents another exception to the institutions mentioned previously in that it has always received the hearty support and encouragement of the labor unions. The nature of the endowments easily explain the causes of this attitude.

15. Hebrew Technical School for Girls.[1] The purpose of this school is to prepare young women to earn their living. Its financial backing has

[1] *Second Annual Report of Mass. Industrial Commission*, pp. 607–613.

been secured through liberal contributions made by a considerable number of individuals. The land and equipment represent a value of $400,000 and the invested funds represent $50,000. The income of the school amounts to $30,000, which represents the subscriptions of about 1800 people.

The number of pupils in 1912 was 477, of whom 324 were in the commercial course. Why commercial courses are preferred to manual courses will be shown in the chapter on commercial schools, but a typical answer, stating the reasons pretty well, was made by a fifteen-year-old girl, who, on entering the school, was asked to write what prompted her to choose the commercial as against the manual course. "She thought the commercial department preferable for the following reasons: she had found, even within her limited experience that mental work was easier and pleasanter than physical work; that mental work is better paid than manual work; that the office hours of the girl in commercial work are shorter than those of the girl who takes up dressmaking and millinery, and thus more time is available after work hours for improvement through study in some evening school."

"The girls are nearly all graduates of a public grammar school, and, while 80 per cent. of these girls were born in the United States, yet only 10 per cent. of their parents were born here."

A recent inquiry into the success of girls who have gone out of this school produced a most

satisfactory report. Of 705 girls whose reported earnings aggregated over $406,000, amounting per girl to an average of $575 a year, or weekly wage of over $11, some 662 had pursued the commercial course, and the average weekly earnings of these amounted to $11.27; the 43 girls who had pursued the manual course earned on an average $8.15 a week. Of this latter group, ten, who were engaged in millinery, earned on an average $8.45 per week; two, at embroidery, earned $7.50; two, at shirt-waist-making, $11; twenty-two, at hand-sewing, $6.61; three, at dressmaking, $11.66; four, as assistant teachers in other institutions, $12.25.

16. Manhattan Trade Schools for Girls. The definite aim of this school is to enable girls to secure in a minimum time, such training as will put them in a position to obtain a living wage. The school is supported by voluntary contributions and donations, which at present amount to about $200,000. Tuition is free. The original requirements for admission demanded that girls be over fourteen and under seventeen years of age, and that they be able to show their fitness and need for the school.

A variety of courses are maintained in work especially suitable for women. This school differs from the preceding in that it produces commercial articles for sale, the income of which amounted, in 1906, to $6600. The girls who have completed the courses are in great demand by employers.

In 1907, 189 positions were filled by the school department, the incumbents being distributed as follows,—80 dressmakers, 6 hand-sewers, 38 operators, 7 straw sewers, 18 milliners, 38 paste and novelty workers, and 2 in miscellaneous work.

In 1910, the school was made a part of the public school system of New York City. By the year 1912, the enrollment had reached 2000. Since then, admission has been granted graduates of elementary schools, or girls fourteen years of age able to pass the work of the 6B grade in the elementary schools.

17. Comparison with Germany. What do the 10,000 or more young people who are being turned out annually in the above schools have in common with German boys and girls of the same social class and purposes in life?

(1) They are trained so that they may be better prepared to make their livelihood with their own hands, and to become respected and useful citizens in society.

(2) The degree of training received in five of these schools is a full equivalent to that of the three-year industrial continuation school, while the curriculum in the other eleven schools corresponds more nearly to the average German lower trade school. Of the sixteen schools under consideration, three required the pupils to be sixteen years old; one, at least twelve and one-half; one, between fifteen and twenty; one, fourteen to seven-

teen; one, ten to fourteen; and three required at least a grammar school education, which under American conditions would make the candidates for admission fifteen years of age or more. Most of the pupils of the remaining eight schools were already engaged in learning a definite trade, which is not usually undertaken before the seventeenth year of age. A careful survey of the above situation in regard to the age of the pupils and their educational qualification, reinforces very strongly the conclusions arrived at in the first chapter as a result of our comparison of the respective standards of the German and American public schools.

(3) Taken all in all, the educational qualifications of pupils entering the American schools are about the same as those required in the German industrial continuation school,[1] though it is safe to say that the students entering the latter group of institutions are two years or more older than the pupils in America[2] who are pursuing the same courses.

[1] To a certain extent the New York Trade School, Pratt Institute, Drexel Institute, and Cooper Union present some exceptions to (2) and (3), in that the previous educational preparation of a certain percentage of their students is better than the German public school standard requires, and their purposes and ambitions and the length of their trade course compare more nearly to corresponding features of the higher trade schools of Germany.

[2] Another class of endowed schools might properly be put into the list already presented. We refer to such institutions for negroes as Hampton Institute in Virginia, and the Tuskegee

Despite these likenesses, we are impressed by the contrast rather than by the similarity, presented by these sixteen institutions to the German industrial schools. The establishment of an aggregate of $16,978,000 as endowments toward elementary industrial education in a little more than two decades stands without a parallel in the history of the German industrial schools! The explanation must be sought in the fact that the economic and social state of society is entirely different.

Normal and Industrial Institute in Alabama. The former was founded during the Civil War, and the latter in 1881. The purpose of these schools was directed more toward solving a race question than an industrial problem. Their curricula pertain only in part to our present thesis, as a large number of the students pursue academic studies, while perhaps one-third study farming. The work done in both these schools has made a national impression and has done more than any other one cause to raise the black race in the estimation of the public. They have also served as excellent models for similar schools. The schools which are now being rapidly established in the South have many visitors, not only from all parts of the Union, but from foreign countries also.

The following statement will give a more definite idea of the greater of these two schools:

The Tuskegee Institute has more than $1,000,000 in equipment, live stock, and personal property, and more than a million and a half dollars in endowment. The total enrollment in the regular Normal and Industrial departments in 1908 was 1587. This included representatives from thirty-six states, and seven foreign countries, of whom 1093 were young men and 527 young women. This enrollment did not include 490 students in the "Short Course" in agriculture.

It is in order to add that the head of this school is the celebrated Booker T. Washington, who spent his early days in slavery.

(1) The chances to accumulate immense fortunes, to rise from poverty to the possession of millions, to pass from log cabin to a seat in Congress, are all not infrequent incidents in American history. Germany has little that can compare with such strides of individual advancement.

(2) Many of the richest men in the United States were once poor boys and retained the keenest sympathy for the poor but industrious, honest young men and women who are struggling for a place in life. Some of these men were so active making money that at the close of life they really had a problem to determine what to do with their accumulation. As neither they nor their immediate family were accustomed to the extravagance and luxury which the possession of wealth brings in time, the thought naturally arose to return the fortune to such ambitious boys and girls as their own childhood days had known. More than sixty per cent. of the money given to these schools came from five men who, in boyhood, had been poor. These men expressly stated in their wills that the need for such education, which they had personally experienced in their youth, prompted their establishing such a school.

(3) In the United States the custom of founding literary institutions by endowment has long been in vogue; hence it was easier to bridge over to the idea of establishing in the same way, industrial schools. In Germany the people look to the State as the initiating agency of schools. The

German population as a whole has much more paternal conceptions regarding everything than has the American. Public opinion in the two countries differs widely on such questions.

(4) In Germany wealth has been in certain families for many generations. Society is well stratified and class lines are closely drawn. Rich families have become fully accustomed to wealth and the ease in life which it brings. The activities of such families are engaged equally as much in spending as in earning.

(5) The difference in the attitude of the two countries toward educational opportunities for girls is well reflected in the nature of these endowments. Quite as much has been devoted to the girls as to the boys in America, when one takes into consideration the proportion of each sex represented in industry.

No.	NAME OF SCHOOL	Founded	Endowment[1]	Tuition	Enrollment	Attitude of Labor Unions	PURPOSE
1.	New York Trade School	1881	$ 960,000	$25-40	685-(1900-1910)	Hostile	To meet the decadence of apprenticeship system and to solve labor difficulties.
2.	Pratt Institute	1887	3,700,000	$45	1502 (1901)	At first was hostile	Because the founder felt the need of such education in his own youth.
3.	Baron de Hirsch School	1891	2,400,000	Free	2700 since founding	Indifferent	For indigent Hebrews.
4.	Williamson Free School of Mechanical Trades	1888	3,000,000	Free	1000 since founding	Indifferent	To supplant apprenticeship; to teach the dignity of labor and morals.
5.	California School of Mechanical Arts	1895	540,000	Free	372 (1901-02)	Unknown	Because the founder felt the need of such an education in his youth.
6.	The Wilderming School of Industrial Arts	1899	400,000	Free	Unknown	Unknown	To teach boys trades, fitting them to make their living.
7.	Hebrew Technical Institute	1888	132,000	Free	About 200 (1901)	Hostile	To help dependent Jews to become self-supporting and to assist their families.
8.	Miller Manual Labor School	1874	1,000,000	Free	250 (1909)	Indifferent	To educate orphans and poor white children in manual labor.
9.	Webb's Academy and Home for Shipbuilders	1894	1,000,000	Free	38 (1901-1902)	Indifferent	To enable young men to learn the art of shipbuilding.
10.	Drexel Institute	1891	3,000,000	Not uniform	1000 total	Indifferent	To bestow culture and better means for obtaining a livelihood.
11.	Spring Garden Institute	1851	358,000	$20 to $25 yearly	793 (1901-02)	Indifferent	Necessity for better workmen.
12.	General Society of Mechanics and Tradesmen	1859	300,000	Free	458 (1901-02)	Indifferent	Originally for children of indigent and deceased members of the society.
13.	Mechanics Institute	1865	400,000	$20 to $25 yearly	936 (1901-02)	Indifferent	Need for skilled labor.
14.	Cooper Union	1854	2,000,000	Practically free	2105 (1901-02)	Friendly	Because the founder felt the need of such an education in his youth.
15	Hebrew Technical School	——	450,000	Free	375 (1906)	Unknown	To prepare girls to earn their living.
16.	Manhattan Trade School for Girls	——	200,000	Free	About 200	Unknown	To prepare girls to earn their living.

[1] These figures represent the financial status up to the year 1910.

XI

SCHOOLS ESTABLISHED BY STATE AID AND APPROPRIATIONS FROM THE MUNICIPALITY

1. Textile Schools. The Centennial Exhibition of 1876 awakened an interest in art and art education that resulted in the organization of the Pennsylvania Museum and the School of Industrial Art.[1] The purpose of the school, as stated in the Charter, is to establish "for the State of Pennsylvania a Museum of Art in all its branches and technical applications, and with a special view to the development of the Art industries of the State, to provide instruction in Drawing, Painting, Modeling, Designing, etc., through practical schools, special libraries, lectures and otherwise." The school was devoted to these subjects during the first few years of its history with a constant regard to industrial needs but without attempting to provide instruction in actual craftsmanship of any kind. The necessity for providing such instruction became apparent very early.

During the first ten years of its existence the School was supported entirely by the dues of subscribing

[1] Miller, *The Annals of the American Academy*, vol. xxiii., No. 1, p. 110.

members, the gifts of public-spirited individuals, and the funds raised in various ways by the trustees and an untiring associate committee of women, supplemented by a very small endowment and the always insignificant amount derived from tuition fees. In 1887 the State Legislature made an appropriation of $5,000 a year, which amount has been gradually increased with the growth of the school until it now amounts to $50,000. Since 1881, the City of Philadelphia has also granted, through the park commission, some support for the Museum in Memorial Hall, and since 1896 it has made direct appropriations to the school,—amounting at present to $25,000 a year—and has provided through the board of education for a system of free scholarships for pupils of the public schools.

The school is for both sexes. It maintains both day and evening classes. It has a staff of thirty-nine instructors, and its enrollment amounts to a little over 1000. The work in which it was so early a leader is still in the first stages of its development, but it has already accomplished enough to demonstrate the utility of an education that concerns itself entirely with practical aims. It can point to nearly 1500 former pupils, who have achieved positions in the industrial world, more or less distinguished but always honorable because helpful. The school certainly has produced upon the life of this, the typical industrial city of America, an impression as beneficent as it is profound.

The school can now lay claim to an equipment excelling that of any similar institution. The numerous machines and appliances have been added from time to time as their necessity became apparent. Wherever it was seen that a new apparatus would assist in

the demonstration of a subject, that apparatus was obtained, and where an improvement was made in machinery already in the school, either that improvement was attached or the old machine was replaced by an entirely new one.

The most important of all these practical departments is the School of Textile Design and Manufacture, which was organized in 1884. It owes its existence to the efforts of many of the most energetic and influential members of the Philadelphia Textile Association. No school of the kind existed in the country, and there were, consequently, neither precedents for organization nor trained instructors available. The manufacturers knew only that they were being beaten in their home markets, protective tariff and all, and they realized that nothing would save them but the cultivation at home of the kind of skill upon which the success of their European rivals depended.

Not only had the number of mills increased in number, but also in size; hence there was a corresponding development of division of labor and specialization of production. This specialization had gone so far that it became virtually impossible to obtain in the typical modern mill a general comprehensive knowledge of the business as a whole; hence young men seeking such knowledge were obliged to secure it elsewhere. Under such circumstances the textile school came into existence to meet the advancing requirements of the textile trade, and thereby prevent waste of effort

in unprofitable routine, and to economize effort by properly directing it.

Besides the above causes favoring the establishment of such schools throughout the country, there were special reasons urging their foundation in the New England States.

(*a*) Foreign mills could produce and sell the higher grades of cloth and the finest grades of woolen and worsted goods cheaper than they could be produced or sold in the United States.

(*b*) The mills in the Southern States could produce the cheap grades of cloth at less cost than could the Northern mills; hence the industry in these States was threatened by competition both at home and abroad.

This last point has special significance in connection with the great effort made by the State of Massachusetts to keep her industries from moving to the South.

In 1895, the textile interests of the State of Massachusetts secured the following law:

SECTION 1. In any city of this Commonwealth whose mayor shall, on or before the first day of July in the year eighteen hundred and ninety-five, file a certificate with the commissioner of corporations that said city has in operation four hundred and fifty thousand or more spindles, not less than nor more than twenty persons, citizens of this Commonwealth, may associate themselves together by an agreement in writing for the purpose of establishing and maintaining a textile school for instruction

in the theory and practical art of textile and kindred branches of industry, with authority to take, by gift or purchase, and hold personal or real estate to the amount of three hundred thousand dollars. A copy of said agreement and of the signatures thereto, sworn to by any one of the subscribers, shall be submitted to the governor, and if he shall certify his approval of the associates as suitable for the purposes of their association and of this act, said associates shall, for said purposes, after due and proper organization by the adoption of by-laws and the election of officers, and after filing a certificate of such organization and the certificate of the approval of the governor with the secretary of the Commonwealth, be and remain a corporation, with all powers and privileges and subject to all the duties and obligations of corporations organized for educational purposes under chapter one hundred and fifteen of the Public Statutes. Said corporation shall be known as the Trustees of the Textile School of the place in which it is located, and shall have power to fill vacancies in their number, however occurring, except as otherwise provided in this act. There shall be only one school incorporated under the provisions of this act in one city.

SECTION 2. Any city in which such a corporation is organized may appropriate and pay to said corporation a sum of money not to exceed, in any case, the sum of twenty-five thousand dollars, and upon the appropriation and payment of said sum of money or any part thereof by any such city, the mayor and superintendent of schools of such city, for the time being, shall be, and become members of said corporation, and the mayor and superintendent of schools of such city shall thereafter be members of such corporation.

SECTION 3. Whenever any such city shall appropriate and pay to any such corporation any sum of money, or whenever the trustees or members of any such corporation shall pay into its treasury, for the purposes of the establishment and maintenance of such school, any sum of money, there shall be appropriated and paid to said corporation from the treasury of the Commonwealth a sum of money equal to the total amount thus appropriated and paid; but in no case shall there be paid to any such corporation by the Commonwealth any sum of money exceeding twenty-five thousand dollars, and upon the appropriation and payment of any sum of money by the Commonwealth for the purposes of any such school, the governor shall, with the advice and consent of the council, appoint two persons to be members and trustees of any such corporation for two and four years respectively, and thereafter, such persons and their successors by similar appointment shall be and remain members of said corporation. The governor with the advice and consent of the council, shall fill all vacancies, however occurring, in the membership created by this section.

SECTION 4. This act shall take effect upon its passage. (Approved June 5, 1895.)

The first school organized under the law was the Lowell Textile School. The following figures are taken from the Trustees' Report of 1908.

Cost of maintenance	$ 66,000
Value of land	105,639
Value of buildings	240,000
Value of equipment	210,000

The School boasts of the most varied equipment of any similar institution in either Europe or America. The raw stock is converted within the School into the finished fabric. January 1, 1909, there were enrolled 173 students in the day classes, and 505 in the evening classes. Of the day students, 149 had completed the high school course. Nearly all the rest had had courses in advance of this standard. The evening classes are intended for those who are employed during the day. These courses enable those enrolled in them to perfect their knowledge of the branches in which they work, and to acquire knowledge of other processes than those in which they are regularly engaged. The entrance requirements are not nearly so high as for the day classes, and the aims of the courses are more moderate.

The Lowell School again gives a fairly representative standard of the previous educational attainment before entering the textile schools. Of the 505 pupils in the evening classes at Lowell in 1908, 234 had only completed the grammar school and 170 the high school. All others were above this standard, and some had had a college training.

The cost of tuition varies. In Lowell it is $100 per year for day pupils who are residents of Massachusetts, $150 for non-residents of the State, and $300 for foreigners.

New Bedford charges no fee for residents of the city. Pupils from the State pay $50 a year, and

those coming from States or regions outside of the State pay $150 a year.

At Fall River no tuition fee is charged to residents of the State. Non-residents pay $150 a year.

So far no uniformity has existed among the several schools in respect to tuition rates, methods of organization, or management. Thus it is not possible to compare these institutions as a whole with the German textile schools.

The Massachusetts Commission on Industrial Education recommended that no tuition be charged in any of the schools, provided the student is a resident of the State, and that in the case of students outside of the State, the tuition fee be high enough to cover the cost of instruction. The Commission furthermore showed the necessity for uniform control of the textile schools in other particulars as well. To take an example, one school had a large debt, another a substantial sum in the treasury. The systems of accounting were so different that the Commission itself could not compare the conditions of the schools with any degree of exactness. When such differences obtain among schools in the same State, one can readily appreciate how futile would be the attempt at a comparison with German textile schools. In Germany, too, the greatest diversity exists in the management of this type of school. (See page 123.)

2. Technical Schools. The Newark Technical School has for its object in all departments the ad-

vancement of the manufacturing interests of the City and State in the line of technical and industrial education.

It is the aim of the management that the instruction given shall be of practical value to all sections of the community, and students will be taught scientific principles which can be applied in their occupations.

The School was organized in 1885, in accordance with the law of March 24, 1881, which gives to any city, town, or township, from three to seven thousand dollars annually, provided said city, town, or township furnishes an equal amount. The City of Newark appropriates ten thousand dollars annually, the support of the School depending on these two appropriations, amounting to seventeen thousand dollars.

In order to meet what seems to be a demand for instruction with reference to a particular trade, a course of study for machinists has been organized, the instruction being confined to the technical side, assuming that all who would take up the course had either already had practical experience at the trade, or were being taught in shops as apprentices.[1]

Applicants for admission to the first year class must be at least sixteen years of age, of good moral character, and must pass a satisfactory examination in arithmetic and in algebra as far as factoring, or present a certificate of graduation from a grammar school.

The following table gives the courses taught and the enrollment for 1908–09:

[1] *Catalogue of 1908–09*, p. 7.

Number of Students, Newark Technical School	
General course	177
Electrical course	14
Electrical wiring course	42
Electroplating course	5
Building construction course	7
Jewelry and silverware course	15
Machinist course	28
Special students in drawing	46
Plumbing course	7
Total	341

The full course requires five years, upon the completion of which a diploma is awarded.

Two more schools have been established under this law, the school at Hoboken (1888) and the Trenton School of Industrial Arts (1898). The Hoboken School offers instruction during the day, chiefly to the boys and girls of the seventh and eighth grades of the public schools. The Trenton School gives instruction almost entirely in the evening to those who are at work during the day.

The economic value of the industrial training seems to be proven by the enhanced monetary returns secured by the students in these schools. For illustration, it is said that the average graduate of the Newark Technical School has added an income of one thousand dollars per annum to his earning capacity above that which he would have had if he had not attended the evening school.

3. Economic Importance of Textile Schools. The increase of value that results from skill and science is well illustrated by the following citations:

As an example of the increase in value which skill and science will give in the textile industries, it may be stated, as being approximately true, that a pound of raw cotton worth 10 cents will, when made into ordinary cloth, be worth 19 or 20 cents, into better cloth $1, and when made into the finest grade of mull, ornamental in design and color, it will be worth from $8 to $12.[1]

From the November bulletin of the Lowell School we have the following:

Results of a recent canvas of the Alumni lead to the belief that nearly 60 per cent. of the graduates from the day classes are receiving a salary of over $1000 a year; 20 per cent. are receiving $2000 and over, with some cases of $4000, $5000, and $7000 salaries. The first graduate has not yet been out from school ten years.

For additional proof note the causes that led to the establishment of these schools. (See page 203.)

[1] *Report of Commissioner of Labor*, 1902, p. 140.

XII

SCHOOLS ESTABLISHED BY CHARITY

WE notice the trade school idea taking root in the larger cities as a form of charity. Many of the most successful schools under this head were organized at first as a mere attempt to amuse the boys and girls, bind them together, and keep them off the streets. In search for some form of healthful and profitable amusement, the instigators and leaders of these little bands became more and more impressed with the idea of teaching trades. Some of these schools have grown to such importance that their work constitutes a salient influence in the lives of the young men and women of the localities in which the institutions are established.

The widest diversity exists in the form and the content of the curriculums, the age at which pupils enter, and the character and competency of the instruction. Not infrequently social features are added to the work of these schools, which affect not only the life of the pupils, but bring about in the whole community a moral and intellectual awakening.

As would be expected from the very object of

the schools and the impecuniousness of the pupils that attend them, the tuition is in nearly all cases either entirely gratuitous or subject only to a nominal charge. The expenses are defrayed by the churches or by the society membership, unless, as is frequently the case, some one individual in the community makes himself the patron of the school and assumes the larger part of the current expense. One finds instances of the teaching being conducted as a side issue by men and women who have other regular employment, but who choose to give a certain part of their time to charity.

Twelve or fifteen of the more important schools are of this type, with a combined property valuation exceeding $200,000, and an annual expense of more than $40,000.

A need for schools of this character to which negroes might have access was strongly felt. Charity employment bureaus found many cases in which race prejudice operated against the negro's securing work, and to help the black man overcome this obstacle was the chief motive in establishing schools for colored pupils, thereby making their labor more valuable and placing it in greater demand.

Aside from the special problems which the negro question brings into the establishment of these schools, one readily observes that the origin of the schools, the method by which they are maintained, the character of their pupils, the spirit

of the teachers, and the channels into which they are leading, all bear the closest resemblance to the general continuation schools of the first three-quarters of a century in Germany. In nearly every respect the comparison is preserved most strikingly.

The chief contribution made by these schools to the movement now on foot in the United States is that they emphasize the great need for such schools, and demonstrate that money and time spent upon their establishment pays rich returns to the communities in which such schools exist. They have proved to be valuable experimental stations in devising new means of curing the ills of society. Society learned a new way of making roses blossom and bloom, where formerly only thorns grew and flourished.

The appended table exemplifies briefly the characteristics which we have just described.

No.	NAME OF SCHOOL	Year Founded	Founder	Trades Taught	Age of Entrance	Enrollment	Tuition	Yearly Expense	Paid by Whom	Value of Property
1	St. George's Evening School, New York, N. Y.	1892	St. George's Protestant Episcopal Church	Carpentry, plumbing, and printing	At least ten years of age	280	Free	$ 5,000	A church member	$ 8,000
2	McAlpin Trade School, New York, N. Y.	1900	West Side Presbyterian Church	Carpentry, iron work, and free-hand drawing	Ten to twenty years of age	89	10c. per mo. for boys under 16; 20c. for boys over	2,500	The Church	27,000
3	Highland Falls Trade School, Highland Falls, N. Y.	1896	An unknown benefactress	Carpentry and architectural drawing	Over twelve years of age	24	Free	600	Philanthropic women	1,200
4	North End Union Trade School, Boston, Mass.	1892	Benevolent Fraternity of Churches	Plumbing, printing, and dressmaking	17 years. Must be employed at the trade	53	$10–$25 per year	——	Tuition and the churches	3,000
5	Mass. Charitable Mechanics Asso'n Trade School, Boston, Mass.	1900	Mass. Charitable Mechanic Association	Bricklaying, carpentry, and plumbing	At least seventeen years of age	——	$15 per term	——	Tuition and the Association	2,000
6	Boston Asylum & Farm School, Boston, Mass.	1814	Boston Philanthropists	Farming, carpentry, blacksmithing, printing, etc.	Ten to fourteen years of age	100	——	20,000	Invested funds, sales of the farm, Overseers of the poor	50,000
7	Institute for Colored Youth, Philadelphia, Pa.	1837	Society of Friends	Bricklaying, carpentry, printing, millinery, dressmaking, and cooking	Sixteen years of age and over	240	Free	5,000	Endowments & subscriptions from Society of Friends	20,000
8	Bureau of Manual Training & Industrial School, Philadelphia, Pa.	1900	A Friendly Society	Bricklaying, carpentry, printing, millinery, dressmaking, and cooking	——	127	$1 per month	3,000	——	5,000
9	St. Joseph's Industrial School for Colored Boys, Clayton, Del.	1896	St. Joseph's Order of the Catholic Church	Mechanical Trades	At least fifteen years of age	34	Free	——	Josephite Order	80,000
10	Women's Educational and Industrial Union, Boston, Mass.	——	A Friendly Society	Dressmaking, millinery, and housekeeping	——	——	Millinery $10 for 24: Dressmaking, $5 for 24 lessons	3,000	Tuition and subscriptions	——
11	People's Institute, Boston, Mass.	1890	Robert Treate Paine Association	Dressmaking and millinery	——	145	——	1,000	Membership fee of $1 per member	——
12	Hebrew Trade School, Philadelphia, Pa.	1883	Hebrew Educational Society	Dressmaking, millinery, and cigar-making	——	——	Free	3,000	Endowment fund, legacies, & membership subscriptions	17,000

XIII

THE YOUNG MEN'S CHRISTIAN ASSOCIATION SCHOOLS

THE Y. M. C. A., is a well-known auxiliary organization of the Protestant churches. The justification of its origin and rapid growth may be attributed to the fact that churches were too slow in adapting themselves to the new social, economic, and educational necessities of the age; hence this new body, with more life and less formality, and organized and built right into the social situation as it is at present, has met with such marvelous success.

This movement has as its goal, several distinct objects, but the industrial educational side is the only one that concerns us here. In that capacity it aims to help an army of 7,000,000 men and boys, as far as it is possible, to enroll them in association work, to improve their condition, and increase their efficiency in trade, commerce, and industry. As six-sevenths of the boys ten years of age leave school before they are fourteen, there is great need for supplementing the public school work, since the years from twelve to eighteen are largely wasted. The following table tells

the story in figures of the development of the Y. M. C. A.[1]

DEVELOPMENT OF Y. M. C. A. EDUCATIONAL COURSES

	1892	1900	1907	1908
Different students	15,000	25,900	42,170	44,591
Paid teachers	500	998	2,052	2,100
Attendance at lectures and talks	11,000	37,600	282,000	——
Educational club members	4,500	5,700	13,600	——
Special vocational courses	——	12	67	——
Associations with local supervision	——	18	46	54
Tuition receipts		$38,000	$268,000	$323,827
Total expenses	$60,000	$172,000	$438,000	$506,900

In 1909 there were about 48,000 students.

The following information was furnished by the National Secretary in March, 1914.

At present over $1,000,000 is spent annually on conducting educational facilities for employed men and boys. The tuition receipts from these students cover about 71 per cent. of the total expense, the membership fees cover 25 per cent. more of the expense, leaving about 4 per cent. to be raised in voluntary contributions.

[1] "These figures represent the work of Canada, Mexico and the United States. It can be said, however, that Mexico's representation is very small and practically all the work in Canada is of a commercial and academic character with a few exceptions. This would have the tendency, therefore, of increasing the probable proportion of work of an industrial and trade character to the total amount of work in the United States."

The work includes (a) reading rooms and libraries in which $100,000 was spent annually and 700,000 books carefully read, besides all the standard periodicals and magazines. (b) Lectures and practical talks. Over 12,000 such are given each year attended by over 600,000 men and boys. (c) About 100 different kinds of educational clubs for research, study and discussion with 23,000 as members. (d) 2,700 paid teachers give instruction in over 120 definite courses of study, to 76,000 men and boys. This is all class work, no correspondence work.

Robert T. Hill, one of the international secretaries, informs me that about 40 per cent. of the present student enrollment are pursuing industrial science and trade courses, 30 per cent. commercial and trade subjects, possibly about 15 per cent. language and academic subjects, and the remaining 15 per cent. special vocational subjects such as real estate, salesmanship, advertising, etc.

The educational privileges are adapted to meet local needs. Sessions are held either by day or by night, and within or outside association buildings. In cities, men and boys from all walks of life receive aid in any of the various grades of work that will best forward their advancement. Thousands of railroad men receive definite practical aid and training. In industrial and manufacturing plants special technical training is emphasized.

As the table indicates, more than 50 per cent. of the expense is defrayed through the tuition

fees of the students. The remainder is made up by the churches and by voluntary subscriptions. The employers have shown a special interest in this work by paying a portion or all of their employees' tuition, and by helping provide equipment from the shops. In selecting the teaching force, practical experience is given especial recognition. As we have already observed in our survey of the German schools, students of the workmen type have more respect for the practical, successful manufacturer or artisan than for the merely scholastic and theoretically trained teacher.

A conflict in national ideals comes to a stronger focus in this type of school than in any other that we shall present in this thesis.

First, the fostering spirit of these schools lies primarily in a systematic and widespread philanthropy. People earn their money comparatively easily, and they like to give. "The Lord loveth the cheerful giver" is the nation's watchword.

Second, the Nation has often been accused of its "greed for the Almighty Dollar," and it must be admitted there is much truth in the charge. There is a powerful tendency to "commercialize" everything, to go into a proposition for "the money there is in it." It is already affecting the schools and churches, and it is hard to keep this very tendency from entering the gates of philanthropy itself.

The constant battle between these rival forces

affects to a decided degree the management and the teaching efficiency of these schools. It comes about in this way: Since these schools represent in their origin, purpose, and management the motives and noblest impulses of charity, it is impossible that the leading teachers should be men who feel that the salary is the index of their worth and their standing in the community. It is impossible to have charity at the bottom of an organization, and an ideal that recognizes its usefulness in "dollars and cents" at the top. But this is the very standard of measurement with which these schools are constantly threatened. There is a very prevalent tendency to measure the worth of a teacher by the salary he gets. A man of great ability might be inclined by his own nature to work faithfully for a small salary in a good cause, yet being confronted constantly by the feeling that his neighbors judge his work by the remuneration he receives, he is ever tempted to look to financial ends in order to get a just social recognition. How different are conditions in Germany! There a man may be engaged in work that pays practically nothing, and yet occupy a most excellent social position, because his salary is not made the chief factor in estimating his worth. Besides, in Germany the teaching profession has a distinct and established standing that carries with it social recognition irrespective of the salary paid. This does not apply in the United States to anything like the same degree.

The commercial tendency is a very subtle, but powerful influence, and manifests itself in many ways. To digress from the main subject for a moment, it may be interesting to illustrate this more fully by citing the fact that pastors in the United States are judged more by the salaries they get, and the amounts they are able to secure on the lecture platform than by any other standard. Pastors themselves are wont to estimate the call to preach in any particular community by the amount of money that accompanies it. This is not meant to disparage the work of the pastors, but simply to show that they have gradually been forced to yield to a national ideal that is firmly rooted in the very life of the people. In order to make a Yankee feel that you are doing something worth while, you must let him know that there is money in it somewhere, even though it be preaching. It is no uncommon thing to hear preachers who are collecting money for foreign missions argue that it will pay financially, because the missions raise the culture of the natives and give them demands that the American markets may later supply. Perhaps it is true, but think of advancing the Lord's work by such propaganda! They verily believe that "a little bread cast upon the waters will return after many days."

It is then clear that as long as money is a factor of such importance in measuring the value of a teacher, it will be difficult to secure in adequate force men of the highest competence for the pur-

pose of giving instruction in the Y. M. C. A. schools. In the effort to meet this critical situation, several bad practices have been employed. One is to give the teacher the tuition receipts, thus inviting him to recruit for sordid reasons. Another is to conduct the work on a percentage basis, a practice which is open to the same objection. A third is to conduct only those classes that pay well, and add features that will become revenue producers. Before the school is aware, it has passed out of the philanthropic group, where it belongs, and become a private school managed on a commercial basis.

Though the Y. M. C. A. schools and the German general continuation schools grew directly out of religious circles, yet their strongest contrast is shown in the mode of religious observation. Nothing that you can tell the average American about the German general continuation schools shocks him more than that they were originally conducted almost wholly on Sundays and religious holidays, and that even now a certain per cent. of the work is conducted on Sunday. On the contrary, popular sentiment in the United States would not allow any of the schools that come under the discussion of this thesis to be in session on Sunday, and this is true for all parts of the country except in a few large cities where the foreign population is great, and for all classes of society. The Sunday work is limited to lectures and studies of a religious or moral character. A purely scientific lecture would be debarred.

XIV

YOUNG WOMEN'S CHRISTIAN ASSOCIATION SCHOOLS

THE Y. W. C. A. is an organization parallel to the Y. M. C. A. The earliest organizations in some of the larger cities date prior to 1870. The object was "to promote the temporal, social, mental, moral and religious welfare of young women, particularly those dependent upon their own exertions for support."

Among the earliest of these associations to undertake to give instruction in industrial subjects may be mentioned the Woman's Training School, St. Louis, 1882, the New York City Y. W. C. A. School, 1886, and the Boston Y. W. C. A. School, 1888.

The establishment of these schools was a result of the direct positive evidence of their necessity. The associations maintained employment bureaus, and here the awful incompetence and lack of preparation to do first-class housework, cooking, sewing, etc., so impressed itself that schools were established as the only means of making large numbers of women economically independent and socially capable of winning decent respect and

treatment from housekeepers and the employing classes. There was recognized, furthermore, the necessity of raising the dignity of labor, and particularly of casting off the stigma upon the work of house service.

This meant that not only the servant girl, but likewise the housekeeper must be trained. The vicious habit of looking upon servant girls as menials and inferiors, and allowing them so little freedom, needed to be remedied. Both the servant girl and housekeeper were to be trained to show a better attitude toward each other.

The value of real estate owned by the Young Women's Christian Association in the United States is four and one-quarter million dollars; however, only a part of this is used for industrial purposes. Some of the larger schools are those of the New York Y. W. C. A., whose building is valued at $600,000 and the annual cost of maintenance of which is $50,000, the Brooklyn Y. W. C. A., whose building is valued at $100,000 and the cost of instruction at $18,000 per annum.

The statistical report for 1908 showed that 133 associations have educational classes, with an enrollment of 11,624; 75 associations have domestic science classes w th an enrollment of 9529; and 128 associations have domestic art classes with an enrollment of 13,218.

The 1913 annual report shows that 45,839 students are included in day and evening classes in 178 city associations, and that they take up a wide

range of subjects,—elementary, academic, commercial, household arts, etc. About two-fifths of the students are in day and three-fifths in evening classes. In eight county associations, which are a comparatively new development, there are classes and clubs containing a small but growing number of students.

In both city and county associations the practical talks promoted by the association Library Committee, the educational or the physical department are among the most valuable means used for the diffusion of information and the creating of practical ideals.

The budget expenditure for educational work in city Associations, according to the 1913 report, was $164,487.99. Over three-fifths of the girls and women in the educational classes are pursuing subjects bearing upon the home arts. These women are from all walks in life,—some from industry, many from business and professional pursuits, many from the home, some from the families of the well-to-do and more from families of moderate means.

The national board is this year undertaking special promotion through appointed commissions; for instance, the Social Morality Commission by arranging schedules in certain normal schools and colleges for carefully selected speakers, who are to give a series of lectures to women students on social morality.

This is the list of the subjects taught:

NUMBER OF Y. W. C. A.'S GIVING VARIOUS COURSES[1]

Educational				
Classes	in	art	in 13	Associations
"	"	china painting	" 14	"
"	"	water color	" 12	"
"	"	arts and crafts	" 45	"
"	"	German	" 53	"
"	"	French	" 56	"
"	"	Italian	" 2	"
"	"	Latin	" 2	"
"	"	Spanish	" 15	"
"	"	Swedish	" 1	"
"	"	Esperanto	" 3	"
"	"	English for foreigners	" 21	"
"	"	literature	" 58	"
"	"	reading	" 11	"
"	"	penmanship	" 12	"
"	"	arithmetic	" 25	"
"	"	spelling	" 12	"
"	"	geography	" 1	"
"	"	grammar, rhetoric, etc.	" 64	"
"	"	history	" 4	"
"	"	physics	" 2	"
"	"	physiology	" 5	"
"	"	elocution	" 33	"
"	"	stenography	" 32	"
"	"	bookkeeping	" 12	"
"	"	telegraphy	" 1	"
"	"	business	" 6	"
"	"	instrumental music	" 11	"
"	"	orchestra	" 7	"
"	"	music	" 16	"
"	"	vocal	" 8	"
"	"	choral	" 24	"
"	"	parliamentary law	" 2	"
"	"	nature study	" 2	"
"	"	etiquette	" 2	"
"	"	manicuring	" 4	"
"	"	book review	" 3	"
"	"	travels	" 6	"
"	"	current topics	" 7	"
"	"	art of conversation	" 1	"
"	"	massage	" 1	"
Domestic Science				
Classes reported in				
		chemistry and food properties	in 2	Associations
		cooking	" 58	"

[1] From statistics of March, 1909.

Domestic Science			
dietetics	in	3	Associations
domestic service	"	1	"
first aid to injured	"	3	"
home nursing	"	17	"
housekeeping	"	10	"
household economics	"	1	"
invalid cooking	"	5	"
kitchen garden	"	1	"
laundry	"	2	"
nursing	"	2	"
sanitation	"	1	"
serving	"	9	"
trained attendant	"	10	"
Domestic Art			
Classes reported in			
costume designing	"	3	"
crocheting	"	1	"
drawn work	"	3	"
dressmaking	"	66	"
embroidery	"	77	"
millinery	"	95	"
plain sewing	"	76	"
shirt waist	"	29	"
skirt	"	4	"
tailoring	"	1	"

The educational work in most associations is not extensive enough to be called a school. Exception must be made, however, in the case of a few large associations, which have a regular course of study, give examinations, and grant certificates upon graduation. The number of associations that have fully developed an educational department is about ten.

XV

PRIVATE INDUSTRIAL SCHOOLS

1. Brewing Schools.[1] Of the schools of a purely private character, the brewing schools form the clearest type, because the liquor industry is avowedly commercial. Cultural elements and influences for a higher civilization are not a part of the goal.

The first and the oldest brewing institution is the United States Brewers' Academy, which is located in New York City. It was founded in 1881. The conditions of entrance require that the applicant be eighteen years of age, and that he have in addition to a good education, some previous experience in a brewery. The regular course covers a period of six months. The tuition alone costs $500. The lectures are held in both English and in Ge man in separate classes. The catalogue is issued in both languages. There are five instructors. In 1901, there were 35 students; in 1908 there were only 10, 5 of whom were German. The value of the property in 1901 was $15,000.

[1] *17th Annual Report of the Commissioner of Labor, Trade and Technical Education*, 1902, pp. 94–99. Also, catalogues of the schools.

The National Brewers' Academy was established in New York City in 1887. There is one course each year, consuming a period of six months. The tuition fee is $500. In 1901, there were ten pupils. The value of the property is about $15,000.

The Wahl-Henius Institute of Fermentology, another school of this type, is located in Chicago. The courses and the tuition for the year 1909–10 were as follows:

COURSES OF STUDY AND COST OF TUITION IN THE WAHL-HENIUS INSTITUTE OF FERMENTOLOGY FOR 1909–10

Regular course in brewing and malting	6 months	$500
" post graduate course	2 "	200
" bottler's course	2 "	200
Maltster's course	6 weeks	150
Engineer's course	2 months	200
Special course for barley investigators	2 to 8 weeks	$100 to 200
" " in the instruction of production of temperance beers	1 week	100

The instruction is given in both English and in German. In 1901, there were about 35 students. Over 700 students had been trained in the school during the decade succeeding 1891, the date of its foundation. The faculty consists of eleven members. In 1901 the value of the equipment was $28,000.

In 1898, Hantke's Brewers' School was opened in Milwaukee. Students must be eighteen years of age and have a common school education. The school is open to practical brewers and maltsters,

young men who know sufficient of the art of brewing to understand the technical terms and who intend to seek positions as technical brewers or superintendents. The courses of study and the cost of tuition for the year 1909–10 were as follows:

COURSES OF STUDY AND COST OF TUITION IN THE HANTKE'S BREWERS' SCHOOL, 1909–10

Brewers' and maltsters' course	6 months	$500
Bottlers' course	2 "	150
Post-graduate course	2 "	200

At the beginning of the year 1914 the school moved into new buildings where, of course, the facilities were considerably greater. A complete model brewery wherein students do actual work, manufacturing many different kinds of beer, has been erected adjoining the school. The instruction is given both in German and in English. The catalogue and a quarterly journal are issued in both languages. There are five instructors. In 1901, there were twelve students attending the six months' course, and the number has been about the same in the subsequent years. The value of the equipment in 1901 was $4500, but the value has risen considerably since then.

The schools present an exceptionally interesting contrast to the German brewing schools. The low value of the equipment, the small number of students, and the very high cost of tuition are

three points that stand in exact contrast to conditions obtaining in Germany.[1]

The brewing business is not considered an honorable business by at least one-half of the population of the United States; hence we notice that there never has been, nor is there now any movement on foot to assist these schools with public funds. In fact, no legislature would dare propose such a measure. Popular sentiment in the United States is so strong against the liquor traffic, that the liquor industry is only too glad to be permitted to continue as a private enterprise and does not expect State or municipal aid. Over one-half of the territory in the United States is now dry territory, and one-half of the people live in territories where the sale of liquor is forbidden. The proportion of dry territory is constantly increasing, too.

The means by which the schools are supported

[1] Such institutions as the *Versuchs und Lehranstalt für Brauer* in Berlin, and the *Königl. Brauereischule* in Weihenstephan, in Munich, may be cited as illustrations to establish the three points of contrast. Each of these schools costs many hundred thousand Marks; each enrolls from 80 to 100 students. The tuition charged is as follows:

For Bavaria	50 Marks
" other German states	150 Marks
" foreigners	100 Marks per month

The first receives aid from both State and Empire, while the latter is purely a State school. For the further establishment of these points we may add that Bavaria has three private schools besides the State school. Each is said to enroll about 50 students. There are several other private schools in different parts of the Empire.

show a great contrast, too. In Germany some of the schools are State schools, others receive a *Zuschuss* from the State. On the other hand, in the United States, aside from some equipment, which has been given by manufactures, the brewing schools have never received either aid or encouragement from either State or municipality. Neither has any of them received any endowment. It is not likely that any American philanthropist will ever devote any of his money in that way.

The whole liquor business cannot be said to be strictly an American enterprise. It is a well-known fact that there is no other industry that is so largely managed by men who are of foreign birth or whose families are of recent foreign descent. This fact has been often cited by the American Anti-Saloon League. The foreign character of these schools is further shown by the fact that three of the four schools give their instruction in German as well as in English. Much of their literature is also issued in German. This is not true of any other type of trade schools. When one looks over the list of students' names in the catalogues of these schools and the brewing firms, the great preponderance of foreign names at once attracts attention. All this shows that these schools are dominated by an influence and code of ideals that has not yet become Americanized.

2. Other Types of Private Schools. There are nearly a dozen schools for watchmakers, en-

gravers, etc., that have been in existence for several decades. Their history and growth is interesting, but no economic or sociological interest that has not already been mentioned in connection with some of the types already discussed is found, hence, we pass them by.

Some schools for barbers have been organized, too, and a few seem to be fairly successful. The special interest which they present for this thesis is the vigorous opposition constantly directed against them by the labor unions. But this point will be discussed in another connection.

Some of the large railroad companies and manufacturing companies have in recent years established apprenticeship systems that include a regular course of study. The companies use this means to get skilled workmen. The apprentice department of the New York Central lines was inaugurated in 1906. The system adopted may be summed up under the following heads:

1. Close supervision and instruction of the apprentices in the shop by an apprentice instructor is provided.
2. A school is conducted by the company during working hours, at which mechanical drawing is taught in a practical way. The apprentice is paid for attendance.
3. A course of problems, carefully arranged to suit the needs of the apprentices, has been prepared. These they are expected to work out on their own time.[1]

[1] Cross, *The Annals of the American Academy of Political and Social Science*, vol. xxxiii., No. 1, Jan., 1909, p. 163.

The method of instruction is as follows:

1. Text-books are not an essential part of the plan.
2. There is no sub-division into subjects.
3. All principles are clothed in problem form.
4. There is no arbitrary standard of the amount of ground to be covered.
5. No examinations are held. The progress and the marks of the apprentices are based on the close personal touch maintained between the instructors and the apprentices.[1]

Schools have been established at nearly a dozen different shops in various parts of the country. In 1908, the total number of apprentices enrolled in the schools was 500. The plan seems to have proved very successful.

[1] *Ibid.*, p. 167.

XVI

CORRESPONDENCE SCHOOLS

OF all the types of schools in the United States, none have had a history and a growth more wonderful, more nearly approaching the incomprehensible than have the correspondence schools. They are the best possible specimens of American push and enterprise. Nothing that you can tell a German educator seems to excite his interest and even amazement more than the rehearsal of the facts about the development, size, and financial and business management of these schools.

Correspondence schools had their origin in this way. In 1885, the Pennsylvania legislature passed a law requiring miners to pass examinations for the purpose of establishing their competency. As a result of this law, a "Question and Answer" column was started in a mining paper edited by Thomas Foster. The success of this column was so great that Mr. Foster enlarged on the idea, and in 1891 placed on sale a correspondence course giving instruction in coal mining. Such was the success of the venture that other fields were entered, although at first with the intention of taking into the schools as students only such men

as were practically engaged in the same line. Later it was found that men could be taught the subjects of engineering successfully by correspondence without regard to the line of work they were actually pursuing, and the field has, therefore, been enormously broadened. The extension has continued until nearly every branch of industrial and commercial science is represented by an enrollment of thousands of students.

The largest school[1] of this type is the International Correspondence School of Scranton, Pa., of which the Mr. Foster just mentioned is the head. Since 1891, the school has enrolled over 1,200,000.

[1] The recent 1913 catalogue contains the following statement: "The progressive policy of the I. C. S. management has enabled the institution to cover branch after branch of industry, art, and business, and to grow accordingly in capital, equipment, and the number of patrons served, up to its present standing, with $6,000,000 paid-up capital; 3,350 employees, including an instruction staff of 400 teachers and 1,650 Field men: 235 courses of study, costing $1,500,000 to prepare; 5,700 copyrights; 3 home office buildings of 7 acres' floor space and costing over $950,000; 34 branch offices in America and 35 in foreign countries; and annual appropriations of $100,000 for preparation and revision of courses. Approximately 200,000 persons have finished the required work in elementary and advanced subjects to the courses; as many more have used the bound volumes of instruction papers to their advantage, and while we are unable to secure information regarding the advancement made by the larger proportion of our students, we are receiving at this date the voluntary reports of advancement of nearly 5,000 students yearly. In addition to these, several thousand students write us that they have derived untold benefit from their studies, in mental and moral discipline, even if they do not use the training received to advance their positions."

The total floor space occupied by the school is seven acres. The mailing department is practically a private post-office. Over 9000 pieces of mail are handled each day. The cost of postage alone is over $125,000 a year.

The average cost of a course is seventy dollars, which two-thirds of the pupils pay in full. The remainder pay a considerable part before abandoning the course. Ninety per cent. of all the students when they enroll cannot do simple fractions. The average student is able only to multiply and divide. The average age is twenty-six years. Twenty-five per cent. of the enrolled pupils never send in any written exercises, but study from their text-books or give up the whole thing as soon as the first enthusiasm has died down. One hundred and seven thousand students have graduated, which is a very indefinite standard to be sure, but it is supposed that they reached advanced standing in their subjects. One-half of the students study one year under the direction of the school.

So far the number of women enrolled in this school is about one per cent., but the school anticipates a great increase in this number as soon as the courses in domestic science are organized. Thousands of students are enrolled from foreign countries.

Another large school of this type is the American School of Correspondence, which is located in Chicago. It was organized in 1897, and since that

date has enrolled 125,000 students, of which number 50,000 are connected with the school as students at the present time. Instruction is limited to some form of engineering, of which several thousand courses or sub-divisions are offered.

About thirty per cent. of the students are at the time of enrollment not twenty-one years of age. The average age is about twenty-five years. A surprising number, notwithstanding their fifty-five years of age, take courses for practical work, and quite a number have enrolled when beyond seventy years of age, with the understanding, however, that they are taking up the work as a pastime only. The average educational equipment of the students is that secured by a grammar school. Of course, there are a great many who have had little or no education at all, being simply able to read and write. About five per cent. of those enrolled are foreigners. For instance, there are several thousand enrolled from New Zealand and South Africa. About twenty per cent. of the students who enroll from the United States are foreigners.

The average student pays about $50 for his course. About 15 per cent. of those entering complete the entire course. This school has 100 teachers and stenographers giving their entire time to the work.

The data regarding the two above-mentioned schools are characteristic of all correspondence

schools. Just how many schools of this character there are, or the exact enrollment for the whole United States, it is not possible to determine, but it is conceded on all sides that the industrial continuation work of the correspondence schools is more extensive than all other industrial continuation work of public and private enterprise combined.

The greatest difference of opinion exists as to the value of this work. The strictures of those who denounce it usually take one of the following forms:

(*a*) Thousands of men with an educational ability too deficient to derive any possible benefit from their courses, are dazzled by the glittering advertisements into paying the tuition.

(*b*) It is only a small percentage that completes any definite course.

(*c*) The vast majority of men enrolling is soon discouraged and frequently turned against all continuation work.

(*d*) The instruction and the grading of papers is conducted on such a wholesale basis that the needs of individual pupils receive scant attention.

Whatever consideration the above objections may deserve, the following contentions must be admitted in support of the good achieved by these schools:

(*a*) To say the least, such schools are better than no school at all.

(*b*) Many men now occupying positions high in industrial life owe their advancement directly to the correspondence school.

(*c*) The work has commended itself satisfactorily to many manufacturing concerns, superintendents, and foremen, who have advised their men to enroll.

(*d*) The fact that thousands of students from every state in the Union are trying to advance themselves in this way and are trying to secure an industrial education is the strongest arraignment of the public school system in the United States. Nothing shows more conclusively to how great an extent the public school really fails to give the people what the country requires. By pointing out the great need of such instruction, the correspondence schools will form a transition stage to a form of education that more adequately meets the demands of modern industry.

(*e*) The soliciting and advertising has aroused the ambition of many young men who enroll for correspondence courses, and after studying for a short while, attend some school for a regular course.

As a business enterprise these schools are thoroughly American in every way, and in this way they present the greatest contrast to anything one finds in Germany. As commercial enterprises they have piled up within a few years millions for the promoters, and this, of course, stamps them with an intensely commercial spirit, and discounts the good they do. As skillful advertisers, it is doubtful if they have ever been excelled. In Germany one finds a great deal of complaint against fraudulent schools, exaggerated

advertisements, the making of sweeping promises, etc., but the author is sure that all he has seen and heard of in Germany is after all on a small scale and quite modest as compared with the pretensions and graft connected with such movements in America. Here the prospective student is assailed by a series of letters written at regular intervals, each one with a distinct message, so worded as to have a special psychological effect. Besides, at different intervals during the year he will receive catalogues and pamphlets, the postage of which alone may often cost fifteen to twenty cents.[1] An interesting characteristic of all this

[1] The following letter is typical:

"Two things there are that never return—time past and neglected opportunity.

"Time is our greatest heritage. And we waste it like spendthrifts, unmindful of its value and small supply.

"Spring and summer, autumn and winter, indifferent, alike, to persons and seasons, time moves on. Time is carrying *you* along toward something—a future filled with bright prospects, or an old age of poverty and regrets.

"You can't dawdle away a summer without jeopardizing a future. Every hour wasted while youth and vigor remain bends your direction more surely toward the junk heap of old and worn-out humanity.

"What you amount to in this world *depends wholly upon yourself.* What you do with your time *determines absolutely what you are.*

"No one can help you *if you will not help yourself.* You have got to make your own fight. And remember that all real progress begins inside the brain. The equipment of your brain—the knowledge stored there—marks the path of advancement.

"You know which way you are traveling—backwards or forwards—and you can change the direction *if you will.* You know

literature is that there is comparatively little reading matter connected with it. It is made up largely of fine pictures of the school buildings, both inside and out, and only too often are inserted pictures of buildings of the city that have little or

absolutely your own weaknesses, and you can remedy them *if you want to.*

"Your future lies with yourself. You are the architect of your own fortune—the shaper of your own destiny.

"An hour a day, *spent in acquiring knowledge*, will save your future. *Aim to get ahead yourself.* Make to-morrow a better day than to-day; next month a better month than this.

"Every hour spent in getting knowledge is a step nearer the goal of success. Every hour wasted in idle pursuits *is an hour lost forever.*

"The world is bristling with opportunities. Hundreds of them past and gone forever, *you might have grasped.* Hundreds more to come you *can* grasp, *if you get ready for them.*

"The successful man of the future is getting ready for his future *to-day.* He is distancing you simply because he embraces every opportunity to improve his attainments, *while you stand still.*

"You need stand still no longer. You can climb, *if you will.* Begin to-day, *this very hour*, the making of your future by signing the enclosed subscription and starting a systematic course of study.

"Naturally, you want to get your training as cheaply as possible. You may still save the large reduction offered from regular prices of certain courses, *but you must act at once.* Will you?"

The following is a typical second letter:

"Five days ago we sent you literature regarding a proposed course.

"Have you read the literature? Have you decided what you are going to do? You have not? Then we urge you to do so promptly.

"We want you to realize the importance of your decision, too,

absolutely nothing at all to do with the school. Besides, the photographs of all the members of the supposed faculty are inserted. All kinds of high sounding degrees are appended to their names.

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its bearing on your future. It may even mean the difference between poverty and affluence. Whatever your decision, be sure that it is right.

"In an hour you can map out a plan of action that may change and benefit your whole life. In a year you can get an education. In one year from to-day, if you use your spare time—and only your spare time—you may have a good working knowledge of some profession.

"Systematize your time. Get up each morning knowing what you are going to do during each hour of the day—and do it. Plan ahead for six months or a year what you are going to accomplish in the development of your mind, the improvement of your intellectual self.

"You have not every hour the opportunity to make a fortune or a great name, but every hour you have the opportunity to improve your mind. Remember that whatever your work is, not far from you is some person of your own age to whom in future years you will look up as a successful man. What that other man is doing now, you could do if you would.

"The successful man of the future, the man about whom you will be talking when you are fifty or sixty, is now a young man like yourself with as little chance. The principal difference between him and you is that he *is* doing *now* what you only are thinking of doing.

"Every hour that finds you industriously at work adding to your knowledge is an hour that adds to your power and chances in the future, *and every hour thrown away is a chance gone forever.*

"You have already wasted enough time to learn ten times as much as you shall ever know. That time is gone, but in the time to come lies the future. What you could have done with the time that has passed, *you can do* with the time to come, *if you will.*

"Sit down to-day, this hour, *this very minute* and plan the use of your time during the next year.

"Plan to devote a given amount of time each day hereafter to

The whole arrangement, from the selection of the quality of paper, to the exact phrasing of every sentence, shows that nothing has been left undone to catch the attention of the masses.

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the acquisition of knowledge that will make you a better and more useful person, *and then do it.*

"In knowledge lies your only hope for the future. Plan to get it, *and get it.*

"Begin now, or the day may come, when you will look back and wish that you could have the years again.

"Then, too late, you will realize that time that has passed, like the water that flows over the mill wheel, is gone forever.

"Only a few days remain during which you may obtain the benefit of the large reduction offered from regular prices of certain courses. Don't lose it by negligence."

XVII

COMMERCIAL SCHOOLS

1. Early History and Methods of Getting Pupils. It is generally conceded that the form of business education, as now given in the typical American business college, was original with R. M. Bartlett, first of Philadelphia, later of Pittsburg, and finally of Cincinnati.[1]

Bartlett's statement of his own experience is perhaps the best explanation of the rise of the business college. He says that when he became of age he wished to know more of bookkeeping but could find no instruction. He offered to enter business houses and learn, but was told that proprietors did not want to be bothered. The predicament in which he was placed was that of not being taken into an office unless he knew bookkeeping, and yet having no place to go to learn. This condition he determined to correct. He went to New York, and later came to Philadelphia where he opened his first school in 1834.[2]

A few years later,

Silas S. Packard began the life of a commercial teacher as an itinerant penman. He said that he

[1] Herrick, *Meaning and Practice of Commercial Education*, p. 178.

[2] *Ibid.*, p. 180.

practiced penmanship assiduously and traveled and taught in various parts of Ohio and Kentucky. It was his custom to go into a town, display his specimens, and organize a class. After a brief term he would move on to a new field of endeavor. This was the practice of Platt R. Spencer, whose name was taken for the Spencerian system of penmanship, of his pupil, H. D. Stratton, and of many others. Up to the late forties the quill pen was in common use, but about that time steel pens began to be substituted. The latter made possible a new kind of work. It is not too much to say that Spencer reduced the instruction in penmanship to a science; before his time it was termed a mere imitative art. About the middle of the nineteenth century a semiangular form of writing, with a combination of forearm and finger movement, began to be common. The old method of producing writing was by measurement, which gave mechanical exactness, but did not give encouragement to learners. The free movement of Platt R. Spencer began a new era. The differences were most marked in the making of capitals. The photographic reproduction of penwork has made possible marvelous advances in the teaching of penmanship. Spencer was termed by Mr. Packard "the greatest writing master of his age." His work was continued by his sons and nephew and the family has made the name an honored one in the annals of commercial education.[1]

For the next forty years the traveling penmanship teacher was a well-known character all over the country. It was the period when the saying

[1] *Ibid.*, p. 181.

obtained, "If a young man has a good character and can write a good hand, he is prepared to enter commercial life."

From these penmanship classes, business colleges trace their origin. As the population grew denser, and business became more complicated, there arose a demand in the cities for a permanent school where young men and women could learn not only writing, but commercial branches beside.

Even before the year 1860, private business colleges were established in all the large cities. The chief subjects of instruction were penmanship, bookkeeping, commercial arithmetic, and commercial law.

As early as 1853 we have in operation the "chain" of business colleges which was headed by H. B. Bryant and H. D. Stratton. Before ten years had elapsed more than fifty schools were working under one management. These schools had uniform text-books as well as interchangeable and perpetual scholarships. The price of the scholarship was forty dollars, and the local managers were given a percentage of the net profits from the schools under their charge. It was the dream of the founders to put a school in every city of ten thousand or more inhabitants. But before 1873, the whole plan fell through, because the poorer schools sold so many scholarships presented for tuition at the better schools that much dissatisfaction arose.

The following extract, which describes the

Eastman schools, illustrates well the daring adventures of the pioneer business colleges of the United States. To a German it must sound more like a novel than like the truth.

Among the pioneer business college proprietors were George W. Eastman and his nephew, H. G. Eastman. The former had a business school in Rochester, New York, during 1853–54, where the latter attended as a student. From Rochester, H. G. Eastman went to Oswego, New York, and later to St. Louis, Missouri, in both of which places he conducted schools with indifferent success. In 1859 he transferred his scene of labor to Poughkeepsie, New York. He was the most daring advertiser of all the early managers, and before he reached Poughkeepsie began the policy that was to make his school successful. On his arrival he is said to have found a "bushel of letters" awaiting him. At times he became heavily involved from his advertising; but he had supreme confidence in his work and was able to inspire confidence in others. Mr. S. L. Williams reports that at times he would buy a whole page in the New York papers at a cost of from $1500 to $3000. Mr. Eastman organized a full brass band which he used in various cities to gather crowds, after which the claims of his school would be presented in a stump speech, and advertising material distributed. Ornamental penmanship was similarly employed to interest people, after which they would be canvassed. Early in his career, H. W. Flickinger went to the Ohio State fair as Eastman's penman. Intense competition from the Bryant and Stratton schools forced Eastman to these methods. His greatest stroke, however, was

in the display he made in the procession at Lincoln's second inaugural, and the distribution of what are claimed as a million circulars to the soldiers who were still in the field. When the armies were disbanded, men who wished to make the most of a new beginning remembered the Eastman propaganda, and H. G. Eastman's business college was a pronounced success. H. W. Flickinger, long known as a masterful penman, was among those who entered at the Eastman school soon after being mustered out of the Union army. Those who knew Eastman characterize him as a strong personality with untiring energy. With Stratton and Packard he left his impress on early business education in this country.[1]

Many of the above-described methods of getting pupils still prevail. All private business schools advertise extensively in newspapers, magazines, and other media. Each school has its own literature, filled with statements concerning men who through a business education have made vast fortunes. Many testimonials are included from older students, who testify to the high salaries they are securing as a result of the training received at that particular school.

A large percentage of the schools have traveling agents, who give their entire time to soliciting pupils. These agents make personal visits to the young men and women, or to their parents, and hold out to them attractive offers of special rates. Every sort of inducement is used to get pupils.

[1] Herrick, *Commercial Education*, pp. 189–190.

The influential people in the various communities are frequently paid commissions for the pupils secured through their instrumentality. Another plan is to pay the local pastor ten dollars or more for every pupil he succeeds in inducing to attend the school.

Some schools conduct an active personal canvass in places located more than one thousand miles from the school. A favorite method is to go over the country with a horse and buggy. In this case solicitors go from house to house, inquiring for young men and women likely to be interested in attending school. The author himself traveled in this manner for three summers, a period of three months each time. As it happened, each summer he was a representative of a different school. The territory covered by him comprised the larger parts of the States of Mississippi, Alabama, and Illinois. This manner of soliciting students is more in vogue in the Southern than in the Northern States. When representatives of rival schools meet, or when they strike territory that has just been canvassed, it becomes necessary for each to present the claims of his own school in very strong terms. These solicitors are also expected to make a special point of attending all county institutes, county fairs, Chautauquas, revival meetings, basket meetings, and conventions that come to their knowledge while en route. At such places literature can be distributed advantageously, and best of all, a representative

frequently gets a chance to make a speech. He does his best to take advantage of such an opportunity to make himself strong with the people of the community.

All this is so different from what is customary in Germany that no comparison is possible.

2. The Present Status of Business Colleges, Commercial High Schools, and the Commercial Departments of High Schools and Normal Schools. In recent years the chain business college idea has again been developed. Among the largest of these is the Draughon's Chain of Business Colleges, which comprises 34 schools. Brown's Business College chain comprises 15 schools. There are several other chains that number from 8 to 12 schools. Each chain is under one uniform system, and owned by one company. The tuition rates, text-books, courses of study, etc., are all uniform.

Another affiliated business college scheme is the one known as the American Institution of Commercial Schools, which is located in Washington, D. C. This organization, through its officers and faculty, examines all candidates for graduation in the affiliated schools. That is, the questions, prepared by the parent school, are sent to the affiliated schools. The present school also conducts a home study course for commercial teachers. The course covers a period of four years, at the completion of which certificates are issued. The real *purpose* of the whole plan is

an attempt to raise the standard of commercial education.

As business enterprises, commercial institutions have been eminently paying investments, in some instances astonishingly remunerative,—much more so than private literary institutions. There are quite a number of business college proprietors who have become wealthy (that is, they are worth several hundred thousand dollars). When we consider that two schools have an enrollment of more than 2000 annually, and eleven more than 1000, and 56 more than 500, and that each student pays between $60 and $100 tuition for the course of six to twelve months (usually about $10 per month), also that the schools usually make in the case of each student a profit of $8 to $10 on text-books sold to him, and that the schools usually charge $5 for a diploma costing only $1,—then it is clear how these fortunes are made.

Another channel through which commercial people are trained is the high school. Although it is more than fifty years since some of the high schools have had bookkeeping and shorthand as subjects in the curriculum, yet it is but little more than a decade since a commercial department formed a recognized division of most high schools. For the past ten years some of the larger cities have had separate commercial high schools. Both of the last-mentioned types of schools are rapidly growing.

Several observations are worthy of note con-

cerning the high schools having commercial departments:—First, the high school principal and faculty use the commercial department as a kind of outlet for their poorer pupils. If a high school student graduates from the literary department of the high school he is in a position to enter most American colleges. But if he is deficient, he fails of promotion after his first year of college work, and this failure reflects unfavorably on the high school that allowed him to graduate. Hence the principal is anxious to have incompetent pupils enter the commercial department because the training there offered leads to no higher course. Hence the carelessness with which the high school work is done is not so likely to come to public notice. This situation is a further illustration of what we have said regarding the precarious position of the American teachers and shows how little independence they have in preventing a pupil from passing from one grade to the next provided the pupil attends the school fairly regularly. The independence of the German teacher in a similar position has already been noted.

On the part of the high school pupils, the commercial courses are frequently selected because they are recognized as the "snap courses." The pupil secures the social position attached to attendance upon the high school, without being obliged to work much.

That the high school faculties look upon the commercial department as a somewhat inferior

department, though demanding for its completion the same amount of time, is well illustrated by oft-expressed regret on the part of some member of the faculty that such and such an ambitious boy or girl (on account of the possible opportunity to earn a good salary as soon as the course has been completed) has been obliged to give up the literary course and take instead the commercial course.

Another type of school that offers commercial courses is the private normal school. The normal schools are primarily literary institutions, but nearly all of them have a commercial department.

The following tables give some idea of the relative growth of the different types that we have mentioned.

COMPARATIVE STATISTICS OF COMMERCIAL AND BUSINESS SCHOOLS [1]

	Male	Female	Total
1898–99			
No. of schools reported, 320			
Commercial course	25,439	7,241	
Amanuensis course	9,920	12,749	
Course in telegraphy	721	260	
1899–1900			
Commercial course	37,538	12,844	
Amanuensis course	14,451	20,054	
No. of instructors	1,413	699	
No. of students	58,396	33,153	
No. of schools reported, 373			

[1] Taken from reports of the Commissioner of Education for the respective years.

	Male	Female	Total
1907			
No. of schools reported, 445			
No. of instructors	1,720	1,136	
No. of students	75,589	61,775	
Students in day courses	50,670	45,430	
Students in night courses	19,806	12,837	
Average attendance, day school			39,687
Average attendance, night school			14,524
In commercial course	38,846	18,425	
In amanuensis course	19,846	34,145	
Course in telegraphy	2,553	530	

The following shows the present status:

The actual number of commercial and business schools in the United States is not below 1000. In 1912, only 519 of these schools reported their statistics to the Bureau of Education. So far as reported more than half the business students that year belonged to public and private schools. There were 143,150 business students in 2516 public and private high schools, as compared with 137,790 in the private commercial schools reporting.

STUDENTS IN COMMERCIAL COURSES, 1911–12

Class of Institution		BUSINESS STUDENTS		
	Schools	Male	Female	Total
Private high schools	603	8,254	5,919	14,173
Public high schools	1,913	58,323	70,654	128,977
Commercial schools	519	72,258	65,532	137,790
Total	3,035	138,835	142,105	280,940

There must have been between 50,000 and 100,000 students in the commercial schools not reporting. It is safe to estimate the total number of students in business courses during some part of 1912 at 350,000.

The following synopsis relates exclusively to the statistics of the 519 private commercial schools reporting to this office:

SUMMARY OF INSTRUCTORS, STUDENTS, AND GRADUATES IN COMMERCIAL AND BUSINESS SCHOOLS, 1911–12[1]

	Male	Female	Total
Number of instructors	1,758	1,262	3,020
Number of students enrolled	72,258	65,532	137,790
Students in day courses	51,875	50,532	102,407
Students in night courses	20,383	15,000	35,383
Average attendance, day schools	——	——	43,451
Average attendance, night schools	——	——	15,741
Students in commercial courses	30,952	12,343	43,295
Graduates from " "	7,009	3,413	10,422
Students in amanuensis courses	15,752	32,317	48,069
Graduates from " "	4,053	9,638	13,691
Students in combined courses	11,552	11,061	22,613
Graduates from combined courses	3,243	3,321	6,564
Students in English courses	7,730	4,634	12,264
Graduates from English courses	416	397	813
Students in telegraphy course	2,001	133	2,134
Graduates from telegraphy course	547	44	591

Before drawing any conclusions from these figures it will have to be noted that they are not fully accurate, hence can be used only to corroborate some facts, which are pretty well known without any figures.[2]

We note that the "high water mark" in the

[1] *U. S. Education Report*, 1912, p. 565.

[2] The unreliability of these figures comes about in this way;

attendance upon commercial and business schools was reached in 1904-05. For several years before that date the increase was but slight, and since then a decline has set in. The commercial departments in high schools and the commercial high schools are checking the growth of commercial schools as private enterprises. The private normal schools also show a decline in the number of commercial students. That falling-off is to be attributed to the same cause, and we may go farther and state that so many State normal schools are now being established that the private normal school is passing altogether.

The rapidly increasing part that women have in these schools is to be noted, especially when compared with Germany. In 1899, one-third of the teaching force was comprised of women, and in 1907, the representation had mounted to two-fifths, and the proportion is certainly still rising. The proportion of women among the students is increasing still faster, especially in the amanuensis courses.

3. Some Comparisons with Germany. (*a*) *The Curriculum.* The curriculum in the commer-

(1) All schools do not report to the Government regularly. Very often the Government blanks are thrown into the waste basket as fast as they reach the schools. (2) There is so much lack of uniformity in the classification of courses that it is really hard to fill out the Government blanks even when the school proprietors desire to give a candid report. (3) These figures often represent gross exaggerations, because some proprietors are anxious to use this as a means of advertising their school; hence they report a much larger attendance than the facts justify.

cial high school usually embraces some form of bookkeeping, consuming three to five hours each week for the whole period of four years, other commercial subjects, modern languages, and such sciences as will be most serviceable in business. These high schools are preparing young men and women for business positions in a highly creditable manner. But the number of commercial high schools is still small as compared with the number of high schools that have commercial departments.[1]

[1] The following extract taken from the March, 1914, *Business Educator* shows what is perhaps the most modern form of a commercial high school curriculum: "The High School of Commerce, where I am connected, which has had a remarkable growth during the first year of its organization, enrolling over eight hundred pupils, has gone so far as to eliminate from its course every subject usually taught in academic high schools. Through the efforts of an aggressive Board of Education and Superintendent of Public Instruction it has substituted for the usual academic subjects in addition to the commercial branches correlated with Shorthand and Bookkeeping, such subjects as Industrial Chemistry, Applied Physics, Commercial German, Elements of Transportation, Accounting and Banking Salesmanship, Telegraphy, Advertising and Elementary Finance. It is claimed that those who do not expect to go to college should receive the maximum of useful instruction in the high school, and should not be burdened by the study of languages and sciences which they will never use. The trend of the times calls for useful training, which if properly offered will possess all the desirable elements of the so-called 'cultural' subjects and none of the undesirable ones. The taxpayers should be allowed to decide what they receive for money invested in the public schools.

"This is one of the greatest commercial nations to qualify men for important positions in the business courses, which teach, in a scientific manner, many subjects designed to fit men for important business pursuits. Our departments of business

If the latest figures could be obtained, they would show, no doubt, that there are over 100,000 in the commercial departments of the American high schools at present. But it is safe to say that not one-half ever learn enough about bookkeeping or other commercial subjects to enable them to take any kind of a commercial position. The commercial course in high schools of this type substitutes for the Latin and Greek of the regular high school course French and German. Much of the mathematics and science of the regular literary course is dropped in order to make way for bookkeeping and stenography.

In the business colleges the students may be divided into three groups, (1) those taking typewriting, stenography, penmanship, and spelling; (2) those taking all of the above mentioned subjects and also bookkeeping and commercial law (the latter is generally known as the combined course and requires from seven months to one year for its completion); and (3) those taking only bookkeeping, commercial law, and arithmetic. However, the number of students in this third class is small as compared with that of the first two divisions.

The study of bookkeeping in most schools is not organized in classes, as is generally the case

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administration have been imitated by the great universities of Europe, which is the highest endorsement any institution could have."—By L. C. Rasmusel, Principal High School of Commerce, Omaha, Neb.

in Germany. Each student works through a set of books as slowly as he likes. The ambitious learn a great deal in a short time, whereas a high percentage leave the school without finishing any definitely fixed course. The American method seems to develop more originality and independence, and gives the individual more chance, while the German plan does more for the average pupil and keeps the "dull head" from making an absolute failure. The fact that the American plan throws the student so completely on his own responsibility, no doubt has something to do with his success in later commercial life.

One cannot help noting that in the two countries a very different degree of importance is attached to certain elements of the training. In Germany the emphasis is upon bookkeeping in all its exact varieties and detail, commercial law, trade economics, and, above all, a special stress is put upon German. In American business colleges students talk of their speed in shorthand, speed in typewriting, and the number of words they can write a minute. A short visit to almost any American business college would at once reveal how much greater is the rôle these subjects play here than in Germany. This is explained in part by the fact that the students command good wages at once or soon after leaving school, and that unless they can work quickly, it would not pay to keep them.

Whereas the Germans spend much time on

German, the Americans devote more time to spelling. This seems to be explained for the most part by the fact that the German language is much more difficult from a grammatical standpoint, while the English spelling is the harder to master. In most business colleges, regular spelling-books are used, and for an hour each day the students are drilled in learning long lists of words derived from the books or from business correspondence. The learning of all the silent letters in words means a tremendous loss of time, not only while in school, but in business life as well. It affords one of the greatest arguments in favor of spelling reform.

(*b*) *The Preparation of the Teachers.* Prof. Ashby, one-time superintendent of the business section of the National Educational Association, states that he thinks about fifty per cent. of the business college teachers have had practical experience in the business world, and that about 15 per cent. of those teaching banking have had experience in banking institutions. The wages paid in business positions are so tempting that it is hard to get first-class teachers. When a teacher is offered the same salary in a business position, especially in a bank, he will, in nearly every case, leave the school because the new position carries with it more prestige and far better chance for promotion.

The teachers, as a rule, are not prepared to train the students for actual business conditions. The student usually acquires a minimum of general

knowledge about bookkeeping and its allied branches, and the supplementary knowledge he secures after he enters business. The close connection between the curriculum and the various business conditions and grades of commercial life, have not been worked out as closely in the United States as they have been in Germany. The difference may be more clearly stated by drawing attention to the fact that in the United States the business of the country and the commercial demands have made the business college. The business colleges are primarily engaged in giving the pupils such a preparation as will enable them to handle the business; in Germany, on the other hand, the business education offered by the commercial schools attempts and accomplishes much more. One also notices a decided effort not only to prepare pupils to take care of the business, but to enable them to formulate plans and devices for creating new business. In other words, commercial education and the commercial world stand in a much closer relation in Germany. This will become still clearer when we answer the following question,—why did business education and industrial education start in the two countries in reverse order?

(*c*) *The relation of Business Education to industry and Commerce.* Under this heading we must first explain why business education and industrial education developed in America and Germany in reverse order.

In Germany we noticed that industrial and commercial education went more or less hand in hand, but the industrial side always just a little in advance. The commercial work usually formed a department of the early industrial schools, and that is true to-day, except where both have become so important as to justify entirely separate institutions. The recent development of commercial education for girls presents some exceptions, in that the commercial schools came first and an industrial department later. But in America, as the material already presented shows, the commercial schools came into existence a full forty years before industrial education was even heard of. In fact, the gap is so great that no one in America thinks of coupling the two or of regarding them as closely related, whereas a different conception regarding their connection obtains in Germany.

Before Germany had any need of commercial schools, where people might be taught how to sell and buy, she had to have something to trade. For that reason the industrial school was called into existence first, in order that products might be put on the market. But in the United States the case was entirely different. The forests were primeval and extensive, the mines were rich and untouched, the soil yielded bountifully from the first. The nation could begin selling at once. Not until the last few years have the people realized that they have up to the present been living on

the "fat of the land," denuding the forests recklessly, wearing out the soil, and allowing capitalism so to crush the masses that industrial education has at length been called in to help place the coming industrial generations on a firmer footing.

The enormous development in commercial education, so far in advance of the industrial side, is further to be explained by the fact that industrial workers could until recently be supplied so largely from the foreign immigrants. This division of the population could not be drawn upon for the filling of commercial positions, because the acquiring by the foreigner of the English language constituted a more or less insurmountable barrier.

This gave native-born Americans a well-nigh exclusive monopoly of commercial positions. In other words, the new world had a special need, which could not easily be filled by foreigners; hence the business college arose to supply a powerful demand.

XVIII

TRANSITION TO THE PUBLIC INDUSTRIAL CONTINUATION SCHOOLS

1. Dissatisfaction with the Present School System. The starting point of the present enthusiasm for industrial schools may be traced to a general dissatisfaction with the organization, curriculum, and final results of the schools that are supposed to educate the masses.

A feeling prevails that trade schools will be the means of raising our educational efficiency. "It is the only way by which the primary education of the masses can be prolonged beyond the merest elements. The great mass of children in our cities get but a few steps beyond illiteracy. The possibility of their children learning something which will insure a decent livelihood will persuade parents to keep them longer in school."

This dissatisfaction was quite tersely expressed by Commissioner Draper at the National Educational Association, which met June 29, 1908, at Cleveland, Ohio.

When but one-third of the children remain to the end of the elementary course in a country where edu-

cation is such a universal passion, there is something the matter with the schools. When half of the men who are responsible for the business activities and who are guiding the political life of the country tell us that children are not able to do any definite thing required in the world's real affairs, there is something the matter with the schools. When work seeks workers, and young men and women are indifferent to it or do not know how to do it, there is something the matter with the schools.

On another occasion the same authority said:

The public school system has had but little thought for craftsmanship, by which the greater part of the people must live, and upon which the moral and intellectual health of the people and the greatness of the nation must depend; the work of the schools has led almost exclusively to mere culture and to professional and managing employments; the efficiency of the teachers has been measured by the number and training of the pupils they sent to the grade above, and thus the pupils have been led to think that the grade above was the goal of life; and the grade above has led to literature and the sciences and to professional and managing vocations. This has taken a great many into situations for which they were not adapted, and has overstocked the professions; has resulted in too many partial or complete failures, and is operating both to the industrial and intellectual disadvantage of the country.

A change in popular opinion is taking place just now concerning the value and the possibilities

of manual training in the public schools. One of the strong arguments for manual training has been that it would prepare our boys and girls to earn their livelihood with their hands. The growth in the number of manual training schools has been remarkable. In 1907, manual training was taught in 644 cities having a population of 4000 or over, whereas in 1890 it was taught in but thirty-seven cities. In the same year, 148 independent manual training schools (which form a part of those already mentioned) had an enrollment of 16,797 in the grammar grades, and 44,294 in the high schools.[1]

The amount of time devoted to manual training varies all the way from one hour per week for a period of one or two years to five hours per week for a period of four to six years.

A fact of interest to the present investigation is the following: Manual training has been tried thoroughly now, and while it has justified its place in the curriculum from the standpoint of a cultural and æsthetic study, it has failed, as a general rule, to prepare boys and girls to enter the workshops. The more this truth is being realized, the stronger is becoming the sentiment for industrial education.

The manual training high schools are too elaborate, too expensive, in a way too dilettante, to lead to anything other than one of the industrial professions;

[1] *Report of the Commissioner of Education*, 1907, p. 1079.

often they do not even prepare for training in one of these. They are much more like schools than shops, whereas they should be more like shops than schools. In buildings that have nothing of the appearance of a shop, they have machinery, tools, equipment, atmosphere, theory and practice, which differentiate them widely from the shop. They are managed by men who are more teachers than workmen, when they should be managed by men who are at least quite as much workmen as teachers. Often the machinery and tools make an interesting show without being needed or effectively used, because there is not a skilled workman to use them. Many a time a principal or teacher pleads for an appropriation with which to buy machinery, tools and other equipment, without any definite theory or plan, or end, in view. If refused, he would feel outraged and become a martyr. If given, he studies the catalogues and sees the agents for the purpose of spending the money in ways that will look well and make an impression upon the people, who always love an object lesson and are often susceptible and superficial about industrial training. Real tradesmen and workmen discriminate; and they are amused by what they see. There is not enough substantial result to it. I know very well that this is not always true, but quite as well that it is often true.[1]

A clearly stated critique of our common school system and a further characterization of the present manual training school movement are contained in the following citation from Professor Commons of the University of Wisconsin.

[1] Draper, *Our Children, Our Schools, and Our Industries*, 1908, p. 7.

I have been able to sketch an outline only of the relations between industrial education and dependency. Industrial education is one of the essential things needed to offset the monotony and specialization of modern industry, and to enable workmen to find and keep their jobs. Monotony and specialization terminate in mental degradation, irregular work, underpaid work, or pauperism, for the grown-up workingmen of the State, although it is seemingly offset by fallacious high wages for boys. The boys make more money than their fathers who have gone through the same machine, and so their fathers get the pauper's idea of living on the wages of their children. Thus the evils create each other in a vicious circle. It would be far better for the boys to get lower wages, if therewith they get industrial education. This would be the case if all boys under eighteen, or perhaps twenty-one, were by law treated as apprentices. Not until such a policy is adopted can we predict that industrial education will do much toward reducing the amount of dependency that modern industry produces. Even then, there are many other things that are also necessary—a state-wide system of employment offices to reduce the time lost between jobs—to bring employees to the jobs they are fitted for—to equalize employment in dull seasons and busy seasons—to shorten hours of labor for monotonous and specialized work. Other policies that are necessary might also be mentioned. But this at least can be said for the State that takes the lead in industrial education,—if it adopts a comprehensive system for all boys and girls—if it exerts itself above all else to bring out and train teachers who combine practical shop-work with an understanding of the theories and

sciences that underlie intelligent shop-work, and with ability to teach, such a state will take the lead in the industrial development of the country. It will afford a wider range of selection for the mechanics, foremen, and intelligent leaders in its industries. It will produce a larger proportion of steady and intelligent workers. It will produce a smaller proportion of helpless and ill-fitted workers—an expensive charge on the growing and changing industries of the state, or on the taxpayers who must provide their useless support.

Of course, it takes time. Social progress does not spring suddenly, like a full-grown talking machine, from the forehead of Edison. Three million people cannot figure out together in advance just what they will want. They can only pass upon the results after they have been attained. It is the business of those who do the planning to know in advance what the results will be. Otherwise reaction occurs, and the program goes further back than it was at the beginning. This is especially true of such a profound and far-reaching reform as industrial education through the continuation school. It reaches into almost every workshop and every home in the state. It goes to the very sources of prosperity and poverty. No greater undertaking could be espoused by a democratic people. No other possesses greater promise of usefulness. Failures here and there will occur, but successes here and there will confute them. So important and vital is the movement that the failures must be promptly corrected and the successes made universal. Then we may expect that industrial education will be accepted and enlarged; that it will contribute a decided share toward the reduction of dependency and the elevation of independence.

2. Enthusiasm for Industrial Training. In the United States we started with the fullest liberty, but we are tending to be more and more restricted. Professor Sumner, of Yale University, stated in the lecture on economics he delivered in 1904 that up to that time a man in the United States could get along very well without any profession or without having learned any special trade, in fact, could change his profession or trade several times. A similar accomplishment would scarcely be feasible in Germany.

By taking on more discipline (and for the purpose of this thesis, that means industrial education for the masses) individual liberty can be increased.

The realization of this idea has found the highest and most powerful expression in the recent organization and phenomenal growth of the Society for the Promotion of Industrial Education, which has enlisted into its ranks, educators, statesmen, philanthropists, manufacturers, and, to some extent, the labor leaders. Its annual meetings are a matter of national concern.

The following extract from the report of the Massachusetts Commission indicates the tendency of the public mind at the present:

A strong general interest in industrial education among students of social phenomena and expert students of education, as furnishing a means of securing greater efficiency among wage earners . . . A practical and specific interest among manufacturers

and wage earners, now that the old apprenticeship system has almost entirely passed away, in the industrial school as a means of training in technical skill and in industrial intelligence . . . A growing feeling of the inadequacy of the existing public school system, and a desire that the schools of the state should meet in a more practical way the exact needs of the great body of the children and youth of the state . . [1]

In June, 1907, the Massachusetts Commission decided to learn the attitude of the manufacturers toward industrial education. The canvass was made personally. The largest industries in twenty cities, having a combined population of 1,000,000, were selected. The men interviewed were the highest resident officials,—president, treasurer, secretary, manager, or superintendent. Every plant employing over ten men was investigated. The different industries were represented by over 900 firms, who employed nearly 200,000 workmen, of which number 13.1 per cent. were under eighteen years of age.

It being impossible to give the opinions of each, the results are given in the form of an interview.

We know that the only assets of Massachusetts are its climate and its skilled labor. The former is reasonably permanent, but the supply of the latter is not keeping pace with the demands made upon it.

There is a great dearth of skilled workmen; in fact,

[1] *Report of the Mass. Commission on Industrial Education*, 1907, p. 13.

we cannot keep our ranks filled with the kind of workmen we would like to employ.

. . . . . .

To-day there are more big jobs and fewer big men than ever.

. . . . . .

Very few skilled workmen are now coming to this country. Industrial conditions abroad have improved to such an extent that good workmen find employment at fair wages.

. . . . . .

We do not care to employ young people under eighteen years of age.

. . . . . .

If a school did nothing more than to teach young men to have a proper regard for the rights of others, it would be doing a grand work. We find one of our great troubles is a lack of moral responsibility on the part of the workmen.

. . . . . .

Problems of labor and capital have been worked out on a basis of mutual distrust.[1]

Industrial education is gaining an added impetus in the United States, because it is an idea generally accepted that education improves morals and reduces crime. The two greatest educators that America ever had (Horace Mann and T. W. Harris) were of this opinion.

In 1899, United States Commissioner of Education Harris showed that 47 per cent. of the

[1] *Second Annual Report of the Massachusetts Commission on Industrial Education*, p. 621.

illiterates were furnishing 33 per cent. of the criminals.[1] He further showed that those that have not learned a trade furnish twice as many criminals as those that have been apprenticed. The prison authorities for the State of Missouri have just submitted a report to the governor in which it is shown that a large percentage of the prison inmates would never have become criminals had they learned a trade.

This movement has been greatly stimulated by many very carefully prepared reports, which show in minute detail the conditions prevailing in the larger cities. Such an investigation is the one made by James S. Haitt, Secretary of the Public Education Association of Philadelphia. In an address entitled "The Child, the School, and the Job," which was delivered in Philadelphia in 1912, Secretary Haitt closed by saying that

> Philadelphia has in her public high schools 13,039 boys and girls. These are the children of parents who are able to send them on to school. At the same time there is a slightly larger number of boys and girls,—13,740—who have been allowed to drop out of school at fourteen years of age and to fight their industrial battle alone. For the former group who are really more able to care for themselves, the city pays $1,532,000 per year for further training in citizenship and preparation for life. For the latter group it pays not one cent. Is this a square deal? Is it economy on the part of the city to permit these child

[1] *Report of Commissioner of Education*, 1899, p. 1312.

workers to go out untrained into industry, to give their lives before they are mature and then to become a burden upon the community?

Another report which is attracting considerable attention is *The Vocational Guidance Survey*, made by Miss Alice P. Barrows in 1912 and based on a selected group of children in New York City. Certain typical districts were selected. The children studied were those who took out working papers. The facts noted were the reasons for leaving school, the age, the grade, and the nature of the employment. Repeated visits were made to the homes of these children during the year. The report concludes:

Upon revisiting these children, two facts stood out conspicuously. First, their restlessness and desire for activity had not found expression in work which meant anything to them, which called upon their growing powers, which made them think and act upon their thinking. They evidently had a sense of futility about what they were doing. "Stemming cherries," "winding silk on spools," "cutting threads on coats," "nailing frames on boxes," had little relation to their real life. It was all incomprehensible to them. Secondly, there was an unformulated, unconscious feeling of protest against the lack of individual attention and training, against the military discipline and inexplicable tasks. The result was that their desire for training, for "a job where you can learn," had become more insistent.

A summary of the work that they did will explain

these facts. Of the 302 children studied, 24 were still in school, 39 had not gone to work. They had either stayed at home or gone to business or trade school. 239 had gone to work. They had entered 406 jobs. Of these jobs, 94 were "outside" errands; 19 were "on wagons," 16 at news-stands; 29 were in department stores; 27 in office work; 44 in miscellaneous inside work; and 177 in manufacturing.

These figures as they stand mean little, but further investigation gave only an impression of confused complexity in the kind of work done. Seventy-nine boys from one school went into fifty-nine different kinds of establishments. They were of all kinds. They were small neighborhood shops and large department stores, tenement room contract shops, and large manufacturing establishments of a range so wide that they represent all but one of the main groups distinguished by the New York State Department of Labor in its classification of industry. These establishments were not only in every industry group, but the establishments in a single group differed radically one from the other. And yet this state still gives no impression of the intricate interweaving of industries and parts of industries.

These facts and the immediate practical problem of the children left the investigators with a feeling of scepticism about the desirability of "guiding children into vocations." General information is sorry comfort to a boy whose whole problem is specific.

In all this complexity only one thing remained constant—the lack of training. It ran through practically all jobs, whatever the type of establishment, and left them all the same dull gray color. In 314 out of the 406 jobs there was absolutely no train-

ing; in 41 there was some chance to "pick up" if the rush was not too great; in 30, some boys had a chance to work on one process, but this usually meant, "I did errands and sweeping and sometimes had a chance to work on a machine"; in 21, there was some supervision, but in the majority of these cases the children were either working in a small shop or with relatives.

Very specific information, which will do much to forward this industrial school movement into the right channels, has been furnished by the Massachusetts Board of Education in its report to the legislature in January, 1913, regarding *The Needs and Possibilities of Part-time Education.* The report states:

It is estimated that there were, in 1910, 74,700 children in Massachusetts between the ages of fourteen and seventeen who were not in school. It is estimated that 40,000 of those who were not in school were regularly employed. Of the 40,000 young people between fourteen and seventeen years of age who were reported as at work, the textile industry employed 17,306 or 43 per cent. Boot and shoe factories took the second largest number, 5,003, while in the metal trades were found 2,042. The confectionery industry employed 904, and printing and publishing 768. Of the total number of these young workers it appears that 71 per cent. began work at about fourteen years of age. Taking the industries separately, 69 per cent. of the candy workers began work not later than fourteen. Of the young shoe workers, 56 per cent. started work at fourteen, while 79 per cent. of the textile group began at the same age.

A large proportion of the 40,000 who are at work lose considerable time through shifting. For example, in the study of textile workers in Fall River and New Bedford 9.4 per cent. of the boys and 33.9 per cent. of the girls have lost from several months to a year, while 3.2 per cent. of the boys and 13 per cent. of the girls who have not married have lost from one to four years. The evil effects of constant or periodic idleness during this formative part of life cannot be too strongly emphasized, and show the need of supervision of these young people during their first years at work. The work which they now do is monotonous, and because they cannot change from time to time to other kinds of work requiring a similar amount of skill, they lose their interest, and many leave only to loaf about. It was found in the study of Lowell boys, who seem to be typical, that boys frequently leave one mill and go to another to do the same kind of work simply to secure a change in surroundings when they cannot change their work.

The education which has been received by those who go to work between fourteen and seventeen years of age is often poor. Only one sixth of the children investigated by the Douglas commission in 1906 had completed the grammar grades. In the present investigation it was found that the largest number, 21.4 per cent. of the total leave at the seventh grade, and 43.6 per cent. leave the grades below the seventh, while only 3.9 per cent. have gone beyond the grammar school. The data presented in Appendix C seems to show that 10.4 per cent. of those entering the confectionery industry left at the fourth grade, while 35.3 per cent. of the young workers in cotton mills left at the fourth or fifth grades. More than

three-fourths, 76.3 per cent. of the textile workers studied, left school before entering the eighth grade and only 1.6 per cent. went beyond the grammar school. The shoe workers stand best in education. Forty-seven and two tenths per cent. of those studied left at the eighth or ninth grades, and 8.3 per cent. went beyond the grammar school.

It is generally conceded that industry as at present organized is not able satisfactorily to educate its young workers. Employers find that their workers are poorly equipped in general knowledge, and lack specific training. Some employers assert that they are reorganizing their business so that it will be necessary to employ fewer young workers; but a comparison of total numbers employed in the various industries in 1904 with the numbers found in 1909 shows a decided increase in the later year. This may mean that the less efficient factories are employing larger numbers of young people. While employers complain of having to employ poorly equipped workers, there is much to be said, from the young worker's standpoint, as to the prevailing lack of opportunity to advance in industry. Judging from the study of 1875 young workers made for this report there seem to exist few opportunities to progress from job to job which would make for advancement in vocational power. Frequently the first and last jobs are identical in character, showing that while there may have been at times an advance, there is a decline later. In the studies of Fall River and New Bedford workers cases were found in which there had been advances for the first two or three years, both in occupation and wage, followed by a decline, due to a lack of physical strength. In addition, there seems

to be considerable shifting from place to place and from job to job. Many of the workers who were interviewed had shifted several times. This was true even of some of those who have been working only a year. There can be little if any educational value derived from a year's work if that has been spent in several factories.

Many of the workers interviewed claimed that they had great difficulty in learning a process requiring skill. Because in three or four years they had been able to increase their wages but slightly, and could see little opportunity ahead, many gave up work in factories for anything else which they could find. Part-time schools should aim to prepare such persons for this period of transition, and to pave the way to better industrial opportunities.

Long hours of monotonous employment, and the fact that under present conditions workers are being restricted to the operation of one or a few machines, with little opportunity to gain a general knowledge of the trade or business, make it imperative that part-time schools be established to give to young workers a broader knowledge of the industry than they are now able to secure. Under the present industrial system there is a dearth of capable foremen and superintendents, due to the lack of opportunity to obtain a general knowledge of the industry, a situation which should be met by part-time schools.

In comparing the records of children who have been at work one year with those who have worked six years, we get much enlightenment as to the amount of progress made by the two groups. In the textile industry, which employs the largest number of young people, we find that more advance is made propor-

tionately in one year than in six. In the matter of wages, only 32.5 per cent. of those who have been at work six years have increased their earnings by amounts of from $4 to $6, while 20 per cent. of those who have worked only one year have had the same increase. Nineteen of those who had been working six years were still earning only the amount of their initial wage. Only one of the older group had increased his earnings more than $9 in six years, while two of the younger group had done this in one year. This situation would seem to indicate that those who have been at work six years have made very little progress over the group at work but one year. If this is a normal condition in certain industries, then part-time schools might give training which will enable these workers to get into other industries which offer better prospects.

All-day vocational schools can render much service in bridging the gap between the regular and part-time schools by discovering the type and character of work which can be given in part-time schools, and by serving as training centers for teachers of part-time and evening schools. The principal reason why these schools have as yet failed to reach larger numbers is that when children have actually left school and started to work it is difficult to induce them or their parents to give up the full wage which is being earned.

While the all-day vocational school can do much, it cannot entirely meet the need for industrial training. The majority of young workers need experience to convince them of the need and value of vocational training. Seventy per cent. of the young workers interviewed were found to favor part-time schools,

and their industrial experience was probably responsible for this attitude. They had worked long enough to begin to realize their deficiencies in education, and to know the value of training along industrial lines. These workers could have steadier employment if they had sufficient industrial knowledge to enable them to shift from machine to machine, from department to department, and, in the case of seasonal trades, from one trade to another.

Evening schools do not solve the problem for young workers under seventeen years of age, as the majority of them are too tired to attend, even where technical courses are offered. Experience shows that while many may register in evening schools, a large proportion fail to attend throughout the term. To delay the training of these young workers who leave school at fourteen to a time when only a few may realize the need of instruction and attend an evening school must result in a distinct loss. Evening attendance is, on the whole, a test of the energy, ambition, and vigor of the wage earner to which many cannot conform. The rush home at the end of a long day's work, the hurried meal, and the long journey to school centers are handicaps which it is difficult to overcome. Large numbers who are undoubtedly worth educating do not, when they reach maturity, attend an evening school, while of those who do many have been out of school for so many years that they have practically forgotten much of what they learned before leaving. Many young people would probably be glad to avail themselves of the opportunity to receive part-time instruction if it were offered immediately upon their leaving the elementary schools, but after a lapse of years in industry it will be difficult to induce them to take the training.

3. A Comparison of the Difficulties Encountered in the Erection and Further Development of Industrial Schools in the Two Countries. (*a*) *Attitude of Labor Organizations.* In the year 1901 the United States Commissioner of Labor made an extended inquiry into the attitude of labor organizations toward industrial education. The summarized answers as given below are found in the *Seventeenth Annual Report of the Commissioner of Labor*, 1902, "Trade and Technical Education," pp. 413–421.

Barbers. From the first establishment of schools for barbers, the unions and the craft generally have been strongly opposed to them. The main reasons assigned are that the work of the schools is not thorough, and that such schools increased unduly the number of barbers.

Bricklayers. Generally speaking, neither unions nor the individual members thereof would be opposed to trade schools which are open only to apprentices or workmen, but schools which take in boys outside the trades and attempt to make mechanics of them are strongly opposed. Such schools help to create an abnormal supply of embryo workmen, and this tends to make the position of the skilled mechanic less secure and has a depressing effect upon wages. An apprenticeship of four years is usually required, and the unions limit the number of apprentices employed in the trade. In one place the local union deducts one year from the regular period of apprenticeship in the case of trade school graduates. As to the question of sending their boys to trade schools,

the consensus of opinion of the labor union men is generally opposed to boys learning trades, and if possible to prevent it, but if no other opportunities offer, to send boys to such schools as are run in connection with actual work at a trade at the same time.

Carpenters and Joiners. Generally speaking, the unions have given neither moral nor pecuniary aid to trade schools, but, on the contrary have opposed them, and the individual members are usually averse to the idea of such schools.

Electrical Workers. Both the unions and the individual members are opposed to trade schools on the ground that they are not practical. It is claimed that they turn out a cheap class of workmen, who accept employment regardless of the wages paid, and thereby make trouble for the regular journeymen.

Garment Workers. As there seems to be a superabundance of apprentices in every trade which guarantees a fair wage, and as this is a great obstacle which unions have to contend with in regulating conditions, it would appear that trade schools would tend still further to depress wages and add to the number of unemployed by thrusting into the ranks large numbers of boys and young men in addition to those who are added through the natural channels. The national union has never given such schools any moral or pecuniary aid, because in the tailoring and cutting branches the supply of apprentices is more than the interests of the trade demand. In the tailoring branch, the ranks of the tailors are continually reinforced by immigrants who quickly learn the minor parts of the trade in the thousand of sweat shops which are conducted by petty contractors who themselves have been here only a short while.

Granite Cutters. The Unions limit the number of apprentices employed in the trade, and an apprenticeship of three years is required. Trade or technical education of any kind will not help a young man to become a journeyman in a shorter time, but it will add to his general intelligence and in the end will enable him to rise higher in the industrial scale. The unions have never given any aid to trade schools, but they are not opposed to them when their courses are open only to those who are actually employed in trade work.

Machinists. In this trade the consensus of opinion seems to be that trade or technical schools are valuable to workingmen when conducted for the purpose of educating and training young men to become skilled in a trade, but when used as a means for providing a class of cheap help to supplant union mechanics in times of labor troubles, they are a detriment.

Plumbers, Gasfitters, and Steamfitters. The labor unions and their representative members are strongly opposed to trade school education as applied to these trades, on the ground that too much time is devoted to theoretical work and too little to that which is practical. It is said that employers prefer trade school graduates because they will work cheaply. This is a source of trouble to the unions.

Owing to the fact that the idea of industrial education is becoming so popular, the labor organizations have been made to recognize that it is absolutely necessary to take a new attitude toward the subject. Unless a different position was taken, the unions would lose in large part the sympathy

of the people. Certain employers' organizations, manufacturers' associations, and philanthropists began to present the idea to the people that unions were preventing the boys from learning a trade, and that such prevention was wrong, unjust, and un-American.

This changed situation has thrown the unions into a state of embarrassment. In fact, no one seems to be able to foresee how this contest over the control of the coming industrial schools will be settled. If one will read the literature and letters from labor leaders given out in recent years by the National Society for the Promotion of Industrial Education, as well as the statements made by representatives of the Knights of Labor of the American Federation of Labor, etc., his attention cannot fail to be attracted by the repeated attempts made to change the opinion held by the people that the unions are opposed to trade schools. A recent statement from John Golden, President of the United Textile Workers of America, is quite characteristic:

The impression seems to prevail in many quarters that organized labor is opposed to the movement of higher education along industrial lines. It is my purpose to show that such is not the case by any means, but that labor unions have lent their aid and moral support to this movement. I am frank enough to admit that organized labor has on some occasions opposed the so-called "trade schools" when the e schools were run with no other object in view but to

reap profit from those whom they were supposed to teach.[1]

Introductory statements of the type of that just quoted, always lead one to suspect that some definite policy will be set forth and some carefully formulated plans presented. But in this expectation one is generally disappointed. If he reads the articles to the close, he has the feeling that the unionist is fully convinced that the trade school is coming, and that he is trying to square himself with an inevitable condition.

If one were to attempt to summarize briefly the present wishes of the unionists, there would be practical unanimity on the following points:

(1) The unions are opposed to trade schools being run by private corporations, or manufacturing concerns, or under the auspices of either.

(2) They are opposed to trade schools which attempt to turn out full-fledged journeymen.

(3) Recognizing now that the intelligent wage earner has a great advantage in the increased power of production, and that the more skilled a craft is, the more respect it can win from the outside world, and the more powerful it will be in contests against the employers, the unions favor some system of education, especially public night schools, at which the attendance is limited to those in the trade only.

[1] *The Annals of the American Academy of Political and Social Science*, vol. xxxiii., p. 185, January, 1909.

(4) The unions want to control the number of apprentices, and fix the time of apprenticeship.

(5) They favor public control of all trade schools, with representatives of labor on the board of trustees.

Unless (1) and (2) are conceded to the unions, such graduates can be used as strike breakers in times of labor disputes, or at other times they will tend to glut the labor market, reduce wages, and prevent the obtaining of a shorter day; while (3), (4), and (5) certainly do represent in a general way the wishes of the unions, yet the hope of getting such terms seems so far off and unattainable that it has not been possible, up to the present date for the unions to set up a fixed program.

That the labor organizations are struggling over this industrial school question with all their might, is fully shown by the report on Industrial Education published in 1909 by the American Federation of Labor, which in America gives the highest and most representative statement of Labor's view. Nothing is more interesting than to note the change of attitude that labor organizations are taking toward industrial education. The committee appointed to consider this question is in itself an index of the importance that is attached to the problem. The following composed the committee:

John Mitchell, Chairman; former President, United Mine Workers of America.

Frank Duffy, Secretary; Secretary, United

Brotherhood of Carpenters and Joiners of America.

Samuel Gompers; President, American Federation of Labor.

James Duncan; Secretary, Granite Cutters International Association.

James O'Connell; President, International Association of Machinists.

John B. Lennon; Secretary, Journeymen Tailors Union of America.

Franc Morrison; Secretary, American Federation of Labor.

Hon. W. B. Wilson; Member of Congress (Washington, D. C.).

Charles P. Neill; U. S. Commissioner of Labor.

Mrs. Raymond Robins; President, Women's Trade Union League.

Miss Agnes Nestor; Secretary, International Glove Workers Union of America.

Rev. Charles Stelzle; Superintendent, Department of Church and Labor (Presbyterian Church).

John Golden; President, United Textile Workers of America.

Hugh Frayne; General Organizer, American Federation of Labor.

Edward Hirsch; Editor, Baltimore *Labor Leader.*

Stuart Reid; General Organizer, American Federation of Labor.

James E. Roach; General Organizer, American Federation of Labor.

James Wilson; President, Pattern Makers League of North America.

Charles H. Winslow; Member, former Massachusetts Commission on Industrial Education.

That the attempt to get at the facts is sincere is shown by the appointment to this committee of highly competent authorities on industrial education. At the Convention held in Toronto, Canada, November, 1909, this committee recommended that the principles of industrial work be taught in connection with the public school system. This instruction was to be especially suited to the requirements and comprehension of children between the ages of fourteen and sixteen. In order that the schools might be kept in close connection with the practical work, it was recommended that there be appointed an advisory board, which was to be composed of representatives of the various trades, including both employers and workmen. The system of instruction in private schools was not to be commended. Suggestions were made as to what ought to be put in the curriculum. It is of especial interest to note that the rights of the workmen were always stressed, the duties of the workmen were hardly mentioned.

In 1909, the author wrote to the superintendent of one of the leading trade schools of the country to find out what the attitude of the trade unions was toward his school. At that time the superintendent reported that the attitude of the unions was unfriendly. Some months ago I wrote to him again to learn whether there had been any change in this attitude. Under the date of March

9, 1914, my correspondent sent the following interesting communication:

I can observe no change in the attitude of the labor unions towards the trade school idea; or rather an assumption of a more liberal attitude towards the admission of boys to the trades. If there has been any change, it is in the opposite direction—the tendency being to adopt a more restrictive policy. It is true that the American Federation of Labor has gone on record as favoring vocational education, but only when conducted under the auspices of the public school authorities. That action on the part of the American Federation of Labor would lead one to believe that the labor organizations were undergoing a change of heart. But the same rules and regulations prevail to keep as many as possible from entering the trades. The unions endorse the plan of educating, at public expense, the few apprentices they see fit to admit into the trades; they offer no objection to those unconnected with any trade from also enjoying the benefits of such courses—it would not be politic for them to do otherwise. And yet none of the latter class stand any chance of securing admission to the trades. Some time ago I was talking to the principal of one of the vocational schools, and he told me that when about to inaugurate a certain trade course, the union in that trade offered to endorse the course and compel the apprentices to attend, provided the class was restricted to those already in the trade. Needless to say, their proposition was not accepted. A boy may decide that he wants to learn a trade; he may devote several years to learning the trade; he may even find, on the completion of his course, an

employer who is willing to give him a job, but the limitations of the union in the matter of apprentices debar him. States and municipalities are spending large sums of money for vocational training, but considerable will be wasted until the avenues of employment are opened to the boys.

Despite the present favorable attitude on the part of the American Federation of Labor, there are still many in labor's ranks who have not been lined up with the present industrial school movement. This is well shown by the results of an investigation conducted in 1910 by the Department of Labor of New York State. Only about one-half of the secretaries of 2451 unions reported themselves as favorable to the establishment of public industrial schools. The remainder did not reply or were opposed.

One of the leading authorities in this country has summarized the situation in this way.

It is the old question of a struggle to control the labor market. I know that there are disinterested employers and a few wise labor leaders, but the former want "an army of trained and willing workers" and the latter are suspicious. I cannot help feeling that, while labor is "coming across," it is still interested in controlling rather than promoting industrial education. They would rather not have it, but, if it must come, they want it on labor's terms. Laborers in this country have not fully realized the necessity of having the right kind of education. They want the same kind of education as the "lawyers" and

think that it will enable them to run things. Labor feels that industrial education like "scientific management" strikes, or may strike at the very heart of "organized labor." They are pinning their faith *first* to organized effort and organization, must be protected at any cost. Hence, "Look out for industrial education."

At this juncture, it may be well to ask why it is that the adjustment of the attitude of labor unions toward industrial schools will be so difficult in the United States, whereas in Germany labor organizations are not only in sympathy with such schools, but as a rule aid them in every way possible. The answer is this—in Germany this difficult problem has been solved. The number of apprentices in a workshop or factory is carefully regulated by law. From the fact that nearly all the apprentices, except those known as "unskilled workers," receive no wages,[1] or an insignificant sum (sometimes 100 Marks at the close of a three-year apprenticeship) it cannot be charged that the schools turn out "half baked" journeymen who depress the wages.

An adjustment such as obtains in Germany is still far from accomplishment in the United States. Here capital and labor are each trying to take advantage of the other. Capital is interested in having trade schools, in increasing the supply of

[1] In some of the choice trades the apprentice actually pays the employer.

skilled labor, and, finally, in securing the highest possible skill for the lowest possible price. Labor tries constantly to diminish the number of skilled workers, and to raise the wages as high as possible. In fact, many local instances of the greatest unreasonableness could be cited.[1]

The temperament of the German and American boy is entirely different. The former seems fairly contented to work three years for practically nothing, and, as a rule, is willing to remain in the same trade. In other words, he has learned to do what he is told, and to accept the place in society that his environment has fixed for him. Hence he does not represent in the industrial world a potential factor of chronic unrest. The latter has opinions of his own, he is anxious to get big wages just as quickly as possible, he wants to keep changing jobs in the hope of doing better,[2] and would,

[1] In Butte, Montana, in 1904, the wages for members of the plumbers' union were $6.50 per day of eight hours, and double pay on Saturday afternoon. They struck for $7.50 per day. After four months, a compromise was affected whereby $7.25 was agreed upon as the wage. Despite the fact that there was a positive lack of workers and that the people were in need, the union refused to take on apprentices. The plasterers were getting $7.50 per day, but saw a chance to take advantage of the people. And so the union struck for $8.50 per day. In both cases the unions were so powerful that non-union labor could not be introduced, hence the people were at the union's mercy.

[2] "There is a tendency, especially on the part of young help, to leave without notice for a small increase of pay, and this produces a situation which is almost intolerable."—"Opinion of Manufacturers," *Second Annual Report of Massachusetts Commission on Industrial Education*, p. 621.

as a rule, consider an apprenticeship of three years without pay entirely out of the question.[1] In fact, a large percentage of the boys are already earning good wages at the age of sixteen or eighteen. To put into operation in the United States the German system of handling these boys would be so powerfully resented by the boys and their parents that as yet no one thinks of suggesting it. However, in time something like the German plan will have to be introduced. If the population increases faster than the arts advance, the social pressure will become more intense, and this will necessitate greater discipline and sharper restriction of rights. The privileges of the individual will have to yield to the interest of the group.

When we come to consider the trade school (see page 128), it is in Germany instead of the United States that opposition finds expression. Germany has not yet been able to devise any scheme by which these graduates can be kept from depressing wages. To use the same method as is employed in the industrial continuation school is not at all practicable. The elements that would

[1] "Many of us are not taking on apprentices, and we realize that the situation is rapidly growing worse. Competition is so keen, and the average boy attainable is so untrustworthy that we cannot afford to take on apprentices; it would be a losing game financially. Apprenticeship has failed largely because there seems to be no sense of responsibility in either the boy or his parents. The American boy has little to recommend him besides his general intelligence, his chief faults are that he is bumptious, and he regards hard work, especially if it is dirty, as degrading." —*Ibid.*, p. 622.

enter into the solution of the problem are so complex that no general system could do justice to the situation.

That no opposition to this type of graduate has arisen thus far in the United States, does not mean that the problem has been solved! It only means that the educational standard and the number of this class of graduates has not yet reached a point where competition has been able to make itself felt. When the United States gets to that point, it will very likely find itself as fully unprepared for the solution as Germany now seems to be.

The United States is in an era of tremendous trade and industrial expansion, and unimpeded opportunities for this type of graduate have always presented themselves. One could easily show that up to the present the supply has never been equal to the demand.

(*b*) *Education for the Negroes.* To give the American negro an industrial education is a problem attended by difficulties that find no parallel in Germany. When industrial education was first introduced into the South, it was not well received by the negroes,[1] because they got the idea that it was intended for them only in contradistinction to the higher or literary instruction which was to be confined to the whites. "It was assumed by many persons that industrial education would teach him to be contented, to occupy a

[1] Anderson, *The Annals of the American Academy of Political and Social Science*, vol. xxxiii., January, 1909, p. 112.

menial position, and to be forever a 'hewer of wood and a drawer of water.' "[1] But since the white people of the South have become enthusiastic for just the sort of industrial education that was once looked down upon as degrading, the negroes' attitude toward it has changed. Hence the difficulty solved itself.

As fast as old problems are solved, new ones develop. While industrial education makes the negro more independent and more ambitious, it also seems to increase the hatred between the races, because it enables the negro to compete in the higher classes of labor. For this very reason there has always been a strong party in the South which has advocated that the best way to solve the negro problem is to keep the negro ignorant. That is one of the great reasons why the Southern States cannot pass a compulsory education law for the white children alone, and they are determined to educate the blacks just as little as possible.

Some time ago I wrote Rev. Anderson, who is in charge of one of the largest industrial colored schools in Philadelphia, asking the question," Does race prejudice make it hard for your graduates to get work in the skilled trades?" His answer is, "It is very hard along certain lines. While trade unions claim not to discriminate against colored workmen, they practically debar them from their ranks by a thousand flimsy excuses. Colored

[1] Booker T. Washington, *Ibid.*, p. 9.

men apply for jobs and are refused, the real reason being that they are negroes." This report fully corresponds with what is well known to be the case in many other places where the negro seeks to enter the higher grades of work.

The South has always boasted of the fact that whites and blacks work so peacefully side by side. This is true when both are engaged in unskilled labor, but incidents are rapidly accumulating to show that it is not true when the work requires any degree of skill.[1]

In 1909, there occurred the fiercest strikes on the Georgia Railroad and Southern Pacific Roads, occasioned by the fact that the white firemen wanted to get rid of the negro firemen. A powerful movement was on foot in Tennessee to get rid of the negro miners. Some of the better class hotels are doing away with the negro waiters, and that was always supposed to be a field for which the negro was especially adapted. This process of closing the doors to negro workers is going on in many other occupations.

No doubt just as soon as the idea gets abroad more fully in the South that industrial education

[1] The Charleston *News and Courier* of August, 1908, says: "The Southerner is jealous of the entrance of the negro into a trade that has been reserved to the whites, and the opening of a white factory to negro labor excites him and drives him to violence. In the North nearly all trades are reserved to the whites, hence all the negroes are eyed with suspicion, because the Northerner is vaguely conscious that the negro threatens his industrial position."

will make the negro a competitor in all kinds of skilled labor, the whole movement will meet to a certain extent a reaction.

The number of lynchings in late years has shown quite an increase, and to the astonishment of the Nation has spread even to the North.[1] Especially noteworthy is the mention of the lynching of dozens of negroes in Ohio and Illinois during the years 1908 and 1909. These occurrences have the effect of causing many people to doubt the advisability of affording the negro an industrial education. Another class of people in the South firmly believe that "the negro race is not adapted to any line of work that requires faithfulness and continuity of purpose." This expression was used in a letter directed to the author by one of the most eminent college presidents of the South. While I was teaching in Mississippi, I heard that very sentiment expressed, and I am sure it represents the feeling of a large percentage of the white population of the South. To cite one of the numerous arguments advanced to establish this theory: A few cotton mills were organized with a view of giving employment to negroes, but every such mill has failed because the negro laborer was not competent to do the work. But in what this incompetency consisted is the point of dispute. One side claims that by training schools, etc., the mills can in time be run by negro labor; the other

[1] "The Negro Problem Becoming National," *Literary Digest*, August 29, 1908.

side obstinately maintains to this very day that there are race differences that make it impossible for the negro ever to reach a standard enabling the employment of any large number of the race in highly skilled labor.

When we consider that these are the questions that absorb so large a part of the attention of Southern people, then it becomes quite clear that, despite the great discussion concerning industrial education, the full installation of a system approaching in thoroughness that obtaining in Germany is still several decades off, and just what form such industrial education will finally take when it becomes general, one would scarcely dare prophesy.

(*c*) *Over Education.* By "over-educated" people we mean those who are no longer willing to work when they have reached a plane of education which should enable them to be of the most service to themselves and society. It is a mistaken ambition that leads people to try to rise to stations already overcrowded, simply because of supposed social advantages. Both Germany and the United States have to deal with the problem of "over-education," but in the latter country the problem is a more pressing one.

Several of the directors of the continuation schools have called the author's attention to the fact that they had to be constantly on their guard so to devise the curriculum, and especially the method of instruction, that the boys and girls

might not harbor the impression that they were above manual labor. If the educational standard of the pupils rises faster than the corresponding standard that dignifies labor, "over-education" will always result. For Germany, that would cause a strong immigration from "Galatzien" and "Russland." Hence it is ever a problem so to teach the coming generation that it will not consider itself above manual labor and yet will be as skilled as possible.

On more than one occasion when the author has visited industrial continuation schools, the directors, in conducting him to some class, say in blacksmithing, have apologized for the work done, explaining that the students were by nature the dullest in the school. The brighter ones were studying bookkeeping or some branch that would give them a better social position, would enable them to sit in an office and wear a collar; and yet often this group would get for a long period of time only a nominal remuneration or no remuneration at all. On the other hand, the boy studying blacksmithing would get good wages from the start, and a skilled mechanic would aways secure more than the one who took the bookkeeping course. Now whenever this striving on the part of the pupil goes too far, the nation is not realizing the greatest strength from its people, or the schools are not rendering the greatest possible service in failing to prevent the young from being discontented with their lot in life.

The Reports of Commissioner Draper of New York and the Moseley Education Commission Reports show that there is a great deal of this "over-education" in the United States. In this very connection, we might point out that a teacher in one of the largest endowed schools in America told the author that this very problem of "over-education" was of the greatest concern to the school authorities. Some years ago the school in question installed the finest equipment for teaching trades. Under the enthusiasm engendered at the time, half the boys of the school took the trade courses; but after leaving school they had to put on overalls and their hands were soiled from the oil of machinery. The result was that very few remained in the trades, but sought instead positions as clerks. At present, the trade equipment is practically idle. Nearly all the boys are studying bookkeeping, although they are well aware that in less than ten years after graduation, the boy who took the trade course will be earning much more than the bookkeeper.

Some of the teachers who have had charge of the domestic science in our more aristocratic cities, have explained that it was very difficult to get the girls to enroll in the cooking classes because they consider themselves above such work. But after their foolish mothers are assured that the cooking is to be taught only as an intellectual quickener and that the daughters will not really learn how to cook, parental consent for the enroll-

ment of their daughters in the proposed course is forthcoming.

In the attempt to make the cooking courses attractive, the school kitchens in the United States are often elaborately equipped. The result is that the girls who do take the cooking courses conducted with such expensive equipment say, when they get home: "Oh! if I had things to cook with such as are furnished at the cooking school, I'd be satisfied, but I can't do anything with such traps as we have at home." This, too, is a kind of "over-education." Another device which our American cooking schools resort to in order to attract girls to take the courses, is making fancy cakes and expensive and rare dishes.

In Germany all this is on a practical basis. The school kitchen is simple, plain, but thoroughly substantial. The equipment doesn't look like a play house, but has the air of a wholesome and well-ordered kitchen. The girls are not spending their time in dilettantism, but are cooking cabbage, beans, pork, and all in the right proportions. They are being prepared in a most practical way to deal with a practical world.

When immigration to the United States grows less, our educational ideas will have to undergo some decided changes to meet the demands of housework and of manual labor. As it is now, native-born Americans are always trying to get the higher positions, and are counting on the foreigners to do the drudgery.

Fifty years ago, the Irish dug our ditches, built our streets, carried the hod; but now we have made them the mayors of our cities, the ward bosses. The Italians are taking their turn at making pavements, and doing the dirty work that nobody else will do. All this makes it quite clear that if immigration ceases, our educational system will at once have to assume new obligations.

XIX

CONTROL AND ORGANIZATION OF THE SCHOOLS IN THE TWO COUNTRIES CONTRASTED AND COMPARED

1. **Difference in Government.** In the United States everything depends on the will of the people, who decide things by majorities. While Americans believe this to be the ideal government, that, in the long run, the people are more sure to get what they want and what they really need, and that in the course of years the greatest national self-reliance and national security can be built on such a system; yet the real, far-seeing, patriotic leaders are aware that it is not without its drawbacks. Much valuable time, effort, and expense are often wasted before the majority can be brought to an advanced view upon a question, especially in the United States, where there are so many voters who know nothing at all about educational issues. The people have to be led, and this process is accompanied at times by so much corrupt politics that the outcome often seems quite discouraging.

Without taking up the question of the advantages and disadvantages of a limited monarchy,

or of an aristocratic form of government, we will simply cite a few ways in which the governmental machinery in Germany can and does handle problems that would be well-nigh impossible in the United States.

Prussia passed a law establishing industrial and commercial schools in Posen and West Prussia, made the attendance compulsory, and arranged plans whereby good teachers might be secured for the schools. All this was done quickly without consulting to any great extent the provinces affected. Now in the United States, it would have been necessary to wait until these sections passed the laws of their own accord. One sees at once how much more quickly the German government can act than is possible for our own. Besides, the expense of these schools was assumed by the Empire. That would not be the case in the United States. The national government would not be allowed to take the nation's funds and devote them to the needs of a special State or group of States. Such an act would be unconstitutional.

The form of government in Germany gives the school officials a prestige that enables them to carry many measures and go much farther in a shorter time than would be possible in the United States. In the former country, school matters are discussed by the professional men, and the people have learned to have a certain respect for this group and to accept rather than criticize each

step in advance.[1] With us everyone discusses school organization, the curriculum, and school laws, whether they know anything about the matters or not. For this reason our schools are so intermingled with politics.

2. In the United States. It is no easy task to keep up with the legislation affecting vocational education in the United States. Each year records great advancement. An excellent summary up to December, 1912, has been given by John A. Lapp, Secretary, Indiana Commission on Industrial and Agricultural Education under the title, *Present Tendencies in Vocational Education.* He says:[2]

We have made wonderful progress during the past six years in vocational education, both in theory and practice. Up to that time a report on the subject meant a discussion of European experience. We went abroad for ideas and practical plans to begin the work which we had found to be essential to our welfare. This country offered little in experience.

Last year an extensive report of the United States Bureau of Labor was confined to American experience only showing how far we have come in that short space of time. In the hurry to make up for the negligence to which we had pleaded guilty, we doubtless have

[1] "The German people have a great faculty of obedience." —Marshall, *Principles of Economics*, p. 48.

[2] Bulletin No. 16 of the National Society for the Promotion of Education for the year 1912.

committed many errors, but they were at any rate the errors of honest minds, led astray by zeal for action.

If I were to set dates when the new era began, I should without hesitation fix April, 1906, when the Douglas Commission reported in Massachusetts, and November, 1906, when the National Society for the Promotion of Industrial Education was born.

The report of the Douglas Commission disclosed a condition which literally made the state and the nation "sit up and take notice." The authoritative statement and proof of facts which to general observation had long been plainly evident concerning the small benefit from the schools to the great majority of youth, the lack of preparation for skilled work, the tragic career of the unprepared in "dead end" jobs, and the great need which industry had for better trained workmen, made it certain that at once we must recast our system on some practical basis to serve all youth and not merely the fortunate few who learned the things of the book and entered the ranks of the professions.

At that time, the National Society took up the burden of arousing the country to action. The society has accomplished that end effectively and in common with all workers their attention is now wisely directed to the guidance of the movement so that the fullest efficiency may result.

Here lies the task of the future. Great movements have come to naught because they were left unguided at critical moments. Fine enthusiasms have often resulted in mere vaporings for lack of organization to translate enthusiasm into wise action, and guide it effectively. We do not need to go outside of the very

field we are discussing for examples. Manual training and drawing started out with enthusiasm to be vocational training. But they were not guided and they have, in many cases, become mere "frills" in vocational training; an appetizer or "mustard relish" as the Massachusetts Commission called them.

To accomplish our purpose of building on solid and permanent foundations, we now have a considerable body of experience in a half dozen States. Massachusetts and New York have been working on the problem with energy and keen insight for more than six years. Wisconsin has had a state-wide system about a year. Connecticut established two State schools in 1909 directly under the control of the State. New Jersey has been giving State aid for many years and has provided for a State deputy to have charge of the work. Ohio permits school boards to make the part-time day school compulsory for children employed, and Wisconsin makes it compulsory for all children employed between fourteen and sixteen. Maine had an investigation thru the State superintendent and now offers State aid. Michigan had an investigation by a special committee, as did also New Jersey; and this year Indiana makes its entrance into the field, thru the report of a special commission on industrial and agricultural education.

Aside from official action, there is the no less significant action by many organizations, such as the Commercial Club and the City Club of Chicago, which are working out plans for definite action.

Doubtless in all this work there have been some mistakes. It would be strange if it were otherwise. It is a new problem when viewed from the standpoint of our educational system. There are hundreds of

different vocations each needing special treatment but susceptible to certain groupings. The grasp of all of the minutiæ of the industries and the relations which education bears to each, cannot be gained in so brief a space of time. The danger lies in emphasizing too strongly those vocations about which we know the most, to the detriment of those vocations for which our education has had little significance. We have learned something of how to deal with education for carpenters, machinists, milliners, and dressmakers, but we have no adequate knowledge of how to educate the millions in other skilled and unskilled employments.

We are, however, in a position now to gather up the experience which the different States and cities have had in charting the field and laying the foundations. No single State is sufficient for our purposes. Each has had its peculiar development and each its peculiar, separate experiences. Altogether they have not more than touched the edges of the problem, but so far as they have gone their experiences should be our guide. Pushing on from where they now stand, this problem can be solved in its entirety by all working together in systematic and sympathetic coöperation.

Points of General Agreement

It would be tedious to present the points to which all states have come in working out this problem. There is general agreement, however, on some phases. Among them may be mentioned:

1. State supervision thru deputies having special qualifications to aid in establishing schools and courses, to give advice on the problems, to investigate the possibilities for most effective training and to guide

the movement safely to practical results. Such a deputy is provided for in Massachusetts, New Jersey, New York, Wisconsin, and in the proposed Indiana and Illinois laws. The general education law of Pennsylvania also provides such a deputy.

2. State aid is given in Maine, Massachusetts, New Jersey, New York, Wisconsin, and is proposed in Illinois and Indiana. No system will proceed far without it. Vocational education is a State and not a local problem. It is unfair to ask a city or town to educate skilled workmen who may migrate and carry away all the city or town has given them. A skilled worker is an asset to the locality, the State, and the nation and all should coöperate in paying the cost.

3. The controlling State board is usually made to include representatives of vocational interests as well as educators. When the board controls merely vocational education the vocational interests predominate; where, as in Indiana, the State board has a wide range of educational duties including such duties as approving high schools, selecting text-books, etc., the board is properly more largely filled with educators. This is a problem peculiar to each State. One fact is uniform. There must be some educators on the board and there must be some vocational representatives. Their proportion is a local question. There seems to be good reason for saying that where a board already exists the States will not prefer a second board for vocational education.

4. The movement began in Massachusetts with separate schools under separate boards, both State and local. That has been changed to permit either a separate school or a school as an integral part of the regular school system. Wisconsin has adopted

the separate school idea, and such a plan is proposed in Illinois. The States of New York, New Jersey, Ohio, and Maine make the work a part of the school system. Indiana follows the latter group but requires, as do Massachusetts and New York, that an advisory committee be appointed locally to aid the school board. The greater ease of modifying existing school courses to meet vocational needs and the greater harmony resulting makes the latter seem advisable. The American people are jealous of any system which separates different groups into classes and prefer to have all education run along without too much evidence of demarkation between the different groups of students.

5. There is uniformity in requiring children to be in school between fourteen and sixteen if not regularly employed. Wisconsin goes further and requires them to return to the school at least five hours per week for further instruction. Ohio grants permission to school boards to compel them to return when vocational schools have been provided. Indiana's commission follows the latter plan.

Since Mr. Lapp's article has appeared, Indiana and Pennsylvania have been added to the list of States that have installed a State system of vocational education, having partial State control and support.

The two States that have passed the most advanced legislation upon the subject are Indiana and Wisconsin. Since these two illustrate two widely different systems of control, the provisions of the laws of each will be presented in somewhat

greater detail. The chief provisions of the Indiana law are given below:

Establishment of Schools

Sec. 2. Any school, city, town or township may, through its board of school comissioners or township trustee, establish vocational schools or departments for industrial, agricultural and domestic science education in the same manner as other schools and departments are established and may maintain the same from the common school funds or from a special tax levy of taxable property, or partly from the common school funds and partly from such tax. Schools, cities, towns and townships are authorized to maintain and carry on instruction in elementary domestic science, industrial and agricultural subjects as a part of the regular course of instruction.

Classes—How Divided

Sec. 3. In order that instruction in the principles and practice of the arts may go on together, vocational schools and departments for industrial, agricultural and domestic science education may offer instruction in day, part-time and evening classes. Such instruction shall be of less than college grade and be designed to meet the vocational needs of persons over fourteen years of age who are able to profit by the instruction offered. Attendance upon such day or part-time classes shall be restricted to persons over fourteen and under twenty-five years of age; and upon such evening classes to persons over seventeen years of age.

STUDIES—HOW OUTLINED

SEC. 5. Elementary agriculture shall be taught in the grades in all towns and township schools; elementary industrial work shall be taught in the grades in all city and town schools, and elementary domestic science shall be taught in the grades in all city, town and township schools. The State board of education shall outline a course of study for each of such grades as they may determine, which shall be followed as a minimum requirement. The board shall also outline a course of study in agriculture, domestic science and industrial work, which they may require city, town and township high schools to offer as regular courses. After September 1, 1915, all teachers required to teach elementary agriculture, industrial work or domestic science, shall have passed an examination in such subjects prepared by the State board of education.

STATE BOARD OF EDUCATION

SEC. 6. The State board of education is hereby authorized and directed to investigate and to aid in the introduction of industrial, agricultural and domestic science education, to aid cities, town and townships to initiate and superintend the establishment and maintenance of schools and departments for the aforesaid forms of education; and to supervise and approve such schools, and departments, as hereinafter provided.

SEC. 7. The State board of education shall consist of the superintendent of public instruction, the presidents of Purdue University, the State University

and the State Normal School, the superintendents of schools of the three cities having the largest enumeration of children for school purposes annually reported to the state superintendent of public instruction, as provided by law, three citizens actively engaged in educational work in the State, at least one of whom shall be a county superintendent of schools, and three persons actively interested in, and of known sympathy with, vocational education, one of whom shall be a representative of employees and one of employers.

The governors shall appoint the members of the board, except the *ex officio* members, for a term of four years.

APPOINTMENTS—HOW MADE

SEC. 8. The State superintendent of public instruction, with the advice and approval of the State board of education, shall appoint a deputy superintendent in charge of industrial and domestic science education, who shall act under the direction of the State superintendent of public instruction in carrying out the provisions of this act. The salary and term of office of such deputy shall be fixed by the board and he shall be removable by the board only for cause.

The State superintendent, with the approval of the State board of education, is authorized to coöperate with Purdue University in the appointment of some person actively connected with the agricultural extension work at Purdue as an agent in supervising agricultural education, who shall serve in a dual capacity as an agent of the State and superintendent and an assi tant at Purdue University. The board and the authorities of Purdue University may fix the

proportion of the salary of such agent to be borne by the State and by the university. Such person shall be subject to removal for cause by the State board of education.

All expenses incurred in discharge of their duties by deputies and agents shall be paid by the State from funds provided for in this act.

Advisory Committee

Sec. 9. Boards of education or township trustees administering approved vocational schools and departments for industrial, agricultural or domestic science education, shall, under a scheme to be approved by the State board of education, appoint an advisory committee composed of members representing local trades, industries and occupations. It shall be the duty of the advisory committee to counsel with and advise the board and other school officials having the management and supervision of such schools or departments.

Admission to Schools—To Whom Made

Sec. 10. Any resident of any city, town or township in Indiana, which does not maintain an approved vocational school or department for industrial, agricultural or domestic science education offering the type of training which he desires, may make application for admission to such school or department maintained by another city, town or township or any school of secondary grade maintaining an approved industrial, agricultural or domestic science school or department. The State board of education, whose decision shall be final, may approve or disapprove

such application. In making such decision the board shall take into consideration the opportunities for free vocational training in the community in which the applicant resides; the financial status of the community; the age, sex, preparation, aptitude and previous record of the applicant, and all other relevant circumstances.

The school, city or town or township in which the person resides, who has been admitted as above provided, to an approved vocational school or department for industrial, agricultural, or domestic science education, maintained by another city, town or township or other school, shall pay such tuition fee as may be fixed by the state board of education; and the state shall reimburse such school, city or town or township as provided for in this act. If any school, city or town or township neglects or refuses to pay for such tuition, it shall be liable therefor in an action of contract to the school, city or town or township or cities and towns and townships or other school maintaining the school which the pupil with the approval of said board attended.

Compulsory Attendance

Sec. 11. In case the board of education or township trustee of any city, town or township have established vocational schools for the instruction of youths over fourteen years of age who are engaged in regular employment, in part-time classes, and have formally accepted the provisions of this section, such board of trustees are authorized to require all youths between the ages of fourteen and sixteen years who are regularly employed, to attend school not less than five

hours per week between the hours of 8 A.M. and 5 P.M. during school term.

County Agent—Petition

Sec. 12. Whenever twenty or more residents of a county, who are actively interested in agriculture, shall file a petition with the county board of education for a county agent, together with a deposit of $500 to be used in defraying expenses of such agent, the county board of education shall file said petition, within thirty days of its receipt, with the county council, which body shall, upon receipt of such petition, appropriate annually the sum of $1,500 to be used in paying the salary and other expenses of said county agent. When the county appropriation has been made the county board of education shall apply to Purdue University for the appointment of a county agent whose appointment shall be made annually and be subject to the approval of the county board of education, and the state board of education. When such appointment has been made, there shall be paid annually from the state fund provided for in this act, to Purdue University, to be paid to the county providing for a county agent, an amount sufficient to pay one-half the annual salary of the county agent appointed as herein provided: Provided, that not more than $1,000 shall be appropriated to any one county. Provided, further, that not more than thirty (30) counties during the year ending September 30, 1914; and sixty (60) counties during the year ending September 30, 1915, shall be entitled to state aid. It shall be the duty of such agent, under the supervision of Purdue University, to coöperate with

farmers' institutes, farmers' clubs and other organizations, conduct practical farm demonstrations, boys' and girls' clubs and contest work and other movements for the advancement of agriculture and country life and to give advice to farmers on practical farm problems and aid the county superintendent of schools and the teachers in giving practical education in agriculture and domestic science. The county board of education is hereby authorized to file monthly bills covering salary and expenses of county agent, the same to be approved by Purdue University, with the county auditor who shall draw his warrant or warrants on the county treasurer for the payment of same.

Cities and Towns—Reimbursed

Sec. 13. Vocational schools or departments for industrial agricultural and domestic science education shall, so long as they are approved by the state board of education as to organization, location, equipment, courses of study, qualifications of teachers, methods of instruction, conditions of admission, employment of pupils and expenditure of money, constitute approved vocational schools or departments. Schools, cities and towns and townships maintaining such approved vocational schools shall receive reimbursement as provided in this act.

State Maintenance

Sec. 14. The State, in order to aid in the maintenance of approved vocational schools or departments for industrial agricultural and domestic science educa-

tion, shall, as provided in this act, pay annually to schools, cities and towns and townships maintaining such schools and departments an amount equal to two-thirds of the sum expended for instruction in vocational and technical subjects authorized and approved by the state board of education. Such cost of instruction shall consist of the total amount raised by local taxation and expended for the teachers of approved vocational and technical subjects. School cities and towns and townships that have paid claims for tuition in approved vocational schools shall be reimbursed by the State as provided in this act, to the extent of one-half the sums expended by such schools, cities and towns and townships in payment of such claims.

The Wisconsin attendance requirements are:

As the result of the recommendations of the Wisconsin Commission on Industrial Education, 1910, laws were passed in 1911 in which the responsibility of the state for the training of all adolescents up to the age of sixteen, whether they remain in school or go to work is asserted; the state taking complete control educationally, so to speak, of the child from his seventh to his sixteenth year.

No child under sixteen is permitted to work at any occupation hazardous to body, health or character. Every normal child is required to attend regularly the public school, or other equivalent school from the seventh to the fourteenth year. Between fourteen and sixteen years of age there is an alternative; every child shall continue to attend the common school faithfully, or, upon obtaining a definite permit from

the Commission of Labor, a truancy officer, or the judge of a state, county, or municipal court, the child may enter upon a definitely specified useful occupation, working thereat not more than forty-eight hours per week, including five hours per week to be spent in the industrial school. If he discontinues the permitted occupation at any time he must return at once to the public school and the employer must return the permit for cancellation.

Every child in Wisconsin between fourteen and sixteen years of age who, under a special permit enters upon some useful employment, must go to an industrial, commercial, continuation or evening school for five hours each week, the employer continuing the wages during those hours, the attendance upon school being for such hours, and at such places, as the local board of education prescribes.[1]

[1] Mr. Prosser has stated the matter rather magnanimously. It is true that in cities of 5000 population there are to be separate industrial boards; it is true that these industrial boards are to foster the continuation of industrial schools; it is true that if this separate industrial board does foster and establish industrial schools that then, mark it, *then*, mark it well, permit pupils are obliged to attend school.

"The law also applies to cities under 5,000 providing, of course, the regular board of education is willing to appoint an industrial board. But even in cities over 5,000, the regular board of education may fail to appoint an industrial board and there is no penalty, and they may appoint an industrial board with an understanding with said industrial board that it shall be inactive,—do nothing, and thus block the establishing of industrial or continuation schools, said board sitting back and saying, 'We will do so when we are coerced upon petition of twenty-five people.'

"However, the law also provides that not more than forty-five schools may be established. On the optimistic side, it ought

Wisconsin is apparently determined to do away with illiteracy, by requiring that no person shall employ a minor over fourteen years of age in a community where there is an industrial school for the industry in which the minor works without first securing a written permit from the commissioner of labor, state factory inspector, or any assistant factory inspector, or from the judge of a juvenile court where such child resides, and certifying either to his ability to read at sight, and write legibly simple sentences in the English language, or that he is a regular attendant at the public evening school or continuation school. This provision operates only against illiteracy, as attendance upon industrial schools in other cases is not compulsory after the age of sixteen.

Wisconsin has likewise rewritten her apprenticeship laws. The former law was written in 1849 and under present industrial conditions was obsolete. It becomes a punishable offense to form "any contractual relation in the nature of an apprenticeship" without complying with this new law. The law requires that all apprenticeship agreements shall be signed by the legal representative of the minor and by the employer.

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to be said that at this time there is a greater demand for schools than the law permits. There is a demand for fifty schools at this time with authority to establish only forty-five. The original law provides for only thirty schools in 1911, but in 1913 this number was increased to forty-five. Now in August, 1914, we have established fifty schools. Five of them we cannot aid, because of the provision of the law. We have plenty of money to aid and money appropriated, but we lack the specific provision to establish more than forty-five schools."—Special communication from Warren E. Hicks, Assistant for Industrial Education, State of Wisconsin.

The agreement shall state the number of hours to be spent in work and the number of hours to be spent in instruction; the total of such hours shall not exceed fifty-five in any one week.

The agreement must provide that the *whole trade*, as carried on by the employer, *shall be taught*, and shall state the amount of time to be spent at each process machine; also that not less than five hours per week of the before mentioned fifty-five hours per week shall be devoted to instruction, including instruction in English, in citizenship, business practice, physiology, and such other branches as may be approved by the State Board of Industrial Education. It shall name the amount of compensation to be paid the apprentice.

The instruction may be given in a public school, or in such other manner as may be approved by the State Board of Industrial Education. Failure to attend school subjects the apprentice to a loss of compensation "for three hours for every hour such apprentice shall be absent without good cause." It is not required that the apprentice attend school during such parts of the year as the public school is not in session.[1]

The contrast mentioned above is exemplified by what is known as the system of "dual control." A second board,—composed of three employers, three skilled employees (these six to be appointed by the Governor), the State Superintendent of Education, the Dean of the Extension Department, and the Dean of the College of Engineering

[1] C. A. Prosser, *American Political Science Review*, 1912, p. 593.

of the University of Wisconsin,—has in its hands practically all vocational training. This board has no responsibility for the general education of the State.

Local boards, entirely independent of the regular school committee, are provided for. To them are assigned the duty and the power to carry on industrial continuation, commercial, and evening schools.

The State grants aid to the amount of one-half of the sum expended in any school up to $3000, and not exceeding $10,000 for any one community.

In addition to the above laws, the chief provisions of the old law of 1907, which permitted trade schools to be established as a part of the regular public school system of a city, still remain in force. A city may establish a school to give instruction in the useful trades to persons more than fourteen years of age.

3. In Germany. In some quarters of our country a lively discussion has arisen as to how these German schools are controlled.

American investigators, who have gone to Germany, do not seem to be fully agreed as to what the German experience would teach us in the way of controlling our own industrial and commercial schools.

Readers, no doubt, are quite familiar with the so-called dual, and unit-control systems.

The proposition of those who favor the dual

control has been quite clearly stated by Dr. Edwin G. Cooley, who says that these "schools should be separate, independent, compulsory day schools, supported by special taxes, carried on usually in special buildings, administered by special boards of practical men and women." In addition to this, Dr. Cooley agrees with Mr. Charles C. McCarthy who drafted the report of the Wisconsin Commission, when he says: "the Germans have established, almost universally, local committees of business men, manufacturers, and workmen, who control these schools wherever they are."[1]

This statement is highly misleading, and one that scarcely in any degree whatever represents the real German experience.

In Germany there is very little local control of schools, or anything else. The authority in all lines is highly centralized.

The organization of the Empire and of the individual German States supports my contention.

The German Empire is composed of twenty-six States. Kaiser Wilhelm II., as Emperor of Germany, has little power, but, as King of Prussia, he is in a position to rule all Germany.

It is true that the German Reichstag of 397 members is elected by the people. Even that is not wholly democratic, because the number of representatives to each election district has become grossly unequal in proportion to the inhabitants of the districts. By reason of the tendency of

[1] *The Elementary School Teacher*, June, 1913.

the city constituencies to return to the Reichstag Socialists or other radicals, the Government has never been willing to allow a redistribution of seats. The legislative functions of the Reichstag are, in practice, distinctly subordinate to those of the Bundesrath, which is composed of fifty-eight delegates appointed by the princes of the monarchical States and the senates of the free cities.

The King of Prussia appoints seventeen for Prussia, two for Brunswick, and one for Waldeck. This gives him an absolute control of twenty votes in the Bundesrath.

Any proposal to amend the Constitution may be checked by as few as fourteen votes in the Bundesrath, whence it arises that Prussia has an absolute veto on amendments. No change may be made relating to the military affairs, the navy, the tariff, and various consumptive taxes without the consent of Prussia.

Prussia has the chairmanship of all standing committees in the Bundesrath. The King of Prussia is in supreme command of the army and navy.

Besides, Prussia enjoys an immense moral force due to the lead in organizing Germany, and also to its preponderance of population over the remaining German States.

The same centralization of authority which we see in the organization of the Empire, is also characteristic of each individual State. Each German State has a two-chambered legislative

body. The Upper Chamber is filled by direct appointments of the crown, or by heredity. This Upper Chamber is always in a position to block legislation which may be proposed by the Lower House, which is elected by the people. The system of government in the Kingdom of Prussia is typical of that in all the States. The Herrenhaus in Prussia is composed of about 400 members, the majority of whom are appointed by the King. Since the Lower House cannot pass any laws without the agreement of the Upper House, the King of Prussia through his representatives controls absolutely all legislation. Now even the Lower House is not a democratic body. In Prussia the voters are divided into three classes according to their wealth. Enough voters are put into the first class to make the sum of the taxes paid equal to one-third of the whole tax raised. An additional number are taken to constitute a second third of all the taxes paid. The remaining voters form the third class. In 2214 districts in Prussia one man owns enough property to enable him to appoint all the electors of the first class. In 1703 districts in Prussia two men own enough property to enable them to appoint all the electors of the second class. To sum up the whole situation, we may say that three per cent. of the voters in Prussia appoint one-third of the electors and that the second third of the electors are appointed by nine per cent. of the voters; the remaining eighty-eight per cent. of

the voters appoint the completing third of the electors.

At the Prussian elections of 1908, a Social Democratic vote which comprised approximately twenty-four per cent. of the total vote, yielded but seven members in a total of 443.

These facts prove conclusively that local control is wholly out of harmony with the organization of both the Empire and the individual States. The friends of the dual-control system are attempting to find in Germany a democracy which we see must be entirely foreign to the whole spirit of the German Government.

The spirit in which the German laws are administered is even more autocratic than the letter of the law would indicate. The crown appoints the Ministers. These Ministers are not subject to any legislative body. They are answerable to no one except the King. If the legislative bodies give an adverse vote to the policy of a Minister, it is not incumbent upon him to resign, as is usual in other States of Europe.

The two elements which count for most in German administration are wealth and birth. A people which tolerates such government organization is not likely to enjoy local control in school matters. My contention will be demonstrated still more fully and effectively by an examination of the school laws.

Laws of the Empire. As has been indicated on page 70, the direction and government of indus-

trial education in Germany does not come under the jurisdiction of the Empire, but is left to the several States. Nevertheless, indirectly, Imperial legislation has had a great influence in forwarding industrial and commercial education.

The main point of this Imperial legislation lies in Section 120 of the *Reichsgewerbcordnung*, which provides that the school districts, or communes, may compel boys and girls under the age of eighteen years to attend an industrial or commercial school. The same provision may be made to apply to girls of the same age, if they are engaged in commercial or clerical work. Parents who refuse to send their children to the schools are subject to a fine. Attendance upon a guild or other continuation school will not exempt the pupil from attending the school established under this law, unless the instruction given has been established as at least equal in grade and amount to that offered in the regular school. Employers are obliged to give workers under eighteen years of age the necessary time to attend such schools.

Most States have additional legislation, which is much more comprehensive and mandatory than the above-mentioned *Reichsgewerbeordnung*.

The question, "What authority shall control these schools?" has been variously answered. The table on next page shows the departments that now control the States named.

From the table which we here present, we see that Prussia and Hessen have a dual school organ-

STATE	Department of the State	Division of this Department	Next Ranking Officer in Charge	Local Control
Prussia	Ministry of Commerce and Industry	A special bureau (*Landesgewerbeamt*)	Government Superintendent (*Regierungs-Prasident*)	Inspectors (*Regierungs-und Gewerbeschulrate*) (Local Boards)
Bavaria	Ministry of Schools and Churches	(*Kammer des Innern der Kreisregierung*)	Continuation School Commission	District School Board Trade School Board Trade School Directors
Saxony	Ministry of Interior Ministry of Schools and Churches	—	——	Industrial School Inspector and Commercial School Inspector School Board
Württemberg	Ministry of Education	Commission of Industrial Education (*Gewerbeoberschulrat*)	Assistant Council (*Beirat*)	Advisory Board
Baden	Ministry of Interior Ministry of Education	A special bureau (*Landesgewerbeamt*)	——	Local Board
Hessen	Ministry of Interior	Trade Bureau	——	Trade School Inspector

ization. Bavaria and Württemberg have put the trade schools in charge of the State Department of Education, which also controls the public schools.

In Saxony, the obligatory continuation schools are under the Ministry of Churches and Schools, whereas the voluntary commercial and trade schools are under the Ministry of the Interior.

In Baden, the industrial continuation schools were put under the Minister of the Interior in 1905. Only one type of schools was affected by the change. The control of the commercial continuation schools, of the continuation schools for agriculture, and of the schools for domestic science was not changed.

In Prussia, we find a unique situation which must be changed before decided advancement can be made in the further development of the trade school. The Ministry for Schools and Churches, which controls the public schools, is always headed by a theologian, that is, by a man who has gone through a seminary, and has had long experience as pastor and officer in Church circles. For this reason the public school system is very conservative in all that it teaches. Religion as a subject in the curriculum is strictly insisted upon for one hour per day throughout the school course.

In 1884, the industrial schools of Prussia were transferred from the Ministry of Schools and Churches to the Ministry of Commerce and Industry. This move represented one of Bismarck's

successful efforts to get something completely out of the hands of the clergy, with whom he usually quarreled. Industrial education has made some great strides since the establishment of the dual organization, but only in so far as it has been possible to develop under the legislation which was in force at the time of the separation. The dropping of religion from the curriculum, and the emphasizing of the practical rather than the bookish students offended the clerical party. This, in turn, has resulted in a constant warfare between the two factions ever since. Up to the present time Prussia has not been able to get legislation making industrial education compulsory except for the provinces of West Prussia and Posen. The two parties cannot agree on the question of religion. Both parties want to make attendance compulsory from the ages of fourteen to seventeen. The clerical party wants a guaranty that one hour per week shall be given over to their hands for religious instruction. The other party claims that religious teaching has no place in a trade school. As it is now, only the districts or communes can make attendance compulsory.

As shown in the table the Prussian schools are under the *Landesgewerbeamt*, which is composed of five members appointed by the Minister. In addition to these there are twelve extraordinary members.

In addition to this there is an advisory board

composed of seventy members, selected from members of the Prussian legislature, mayors of cities, representatives of industry and commerce, trade school directors, representatives of leading educational and technical organizations, and several other societies.

This larger body meets once in two years for a period of several days to discuss all kinds of questions connected with the schools. The questions for discussion are submitted by the Minister of Commerce and Industry. After he gets their advice, he does as he pleases.

The control of the schools is placed under the regular board of five members who receive their appointment from the Minister of Commerce and Industry. The duties of this board are as follows: to arrange the curriculum, the examinations, to prescribe the methods of instruction, to provide the material necessary for instruction, to appoint the directors and teachers, to prepare plans for the further training of the teachers, to supervise the construction of new buildings, and to recommend the budget.

This board is to keep itself posted as to the capability of the directors and teachers and to report on the efficiency of the school in every detail.

There is, then, no local control whatever. This applies to more than three-fourths of all the commercial and industrial continuation schools in Prussia.

Let it be remembered that the friends of the "dual-control" system cite Prussia as their best example.

Next let us consider the remaining one-fourth of the industrial and commercial continuation schools of Prussia.

There are certain types of industrial schools established by guilds and chambers of commerce that are controlled by local boards. One of the finest of this type is the commercial school in Berlin. It receives no state or municipal aid. All expenses are paid to the Chamber of Commerce. There are several types of industrial schools in Berlin, the expenses of which are paid entirely by the guilds. Schools of this type would, of course, be no argument for a two-board school system in the United States, where the State and municipality bear the expenses.

Even these schools are not wholly free from state influence, because the State allows them to exist only because they are at least equal and most generally more advanced than the ones required by the state law.

The remaining fraction of the one-fourth is made up of guild schools, that do receive some state aid. In such cases the State assumes control, although the local board continues as a sort of advisory and honorary body.

In the light of these facts, how is Dr. Cooley warranted in saying that "everywhere, but in Bavaria, these schools are directed by a board or

committee on which the commercial or industrial interest is given the controlling power?"

Where is the warrant for Mr. McCarthy's statement that "the Germans have established, almost universally, local committees of business men, manufacturers, and workmen who control these schools, wherever they are?"

Above these continuation schools, there is another type, called *Fachschulen*. These trade schools are intended to train master workmen and men who expect to be superintendents of factories. Tuition is charged, and attendance is voluntary. The course requires the full time of the student for a period of two to four years. These schools are open to those who have completed the work of the continuation schools, or to those who have had five or six years in a *Realschule*. There are two classes of *Fachschulen*. The state trade school is controlled by the director and a board representing the municipality. The law states expressly that the director is not under this board. When there is a disagreement, the issue is settled by the Minister. This board gives advice with reference to new buildings, the arrangement of the curriculum, the appointment of teachers, the amount of the budget, and on any other question that may be submitted by the Minister. The director and teachers are appoined by the Minister.

Another class of those *Fachschulen* is the municipality trade school, which receives a state subsidy. Such a school is controlled by a board of

seven members. The mayor of the city, three members appointed by the municipality, and three more appointed by the Minister, constitute the board. This board is responsible to the *Landesgewerbeamt*, which has final jurisdiction over the appointment of directors and teachers, the organization and curricula of the schools, the construction of new buildings, and the amount of the budget. Hence we see that local control, beyond giving counsel, finds little support even in these higher-class industrial schools.

Baden

In 1905, the industrial continuation schools were put under the Minister of the Interior. The change was made to establish a closer connection between these schools and the *Gewerbe- und Fachschulen*. The latter are recruited to a limited extent by the former. The former aims to teach the mass of workers; the latter prepares foremen, superintendents, and captains of industry. Now, if in this country we could put our industrial schools under the same control that such schools have in Baden, there would be some good sense in separating them from public school management, because in that case one could be sure of intelligent supervision.

The advocates of dual local control in this country can find no encouragement in the change made in Baden, because the schools were taken

from the Ministry of Education so that they might be governed by the same board which governs the higher technical schools. It was not done in order that these schools might be governed by a "board of 'so-called' practical men." These schools are governed, in the main, by a board called the *Landesgewerbeamt.* This is not a local board. Each school has a local board whose functions are largely advisory. Director Sierck, editor of the school, *Zeitschrift für das gesamte Fortbildungsschulwesen in Preussen*, says: "Its functions are considerably limited by detailed regulations and by far-reaching supervisory powers of higher authorities."[1]

The control of the commercial continuation schools, the continuation schools for agriculture, and schools for domestic science still remain under the Department of Education.

Saxony

Whereas no great change has been made in control of the industrial schools in the last decade, it will be interesting to note a tendency to do away with the dual system in Saxony. The journal *Die Fortbildungsschule* (Leipzig, April, 1911), contains an article on "Der Dualismus im gewerblichen Unterrichtswesen." There the

[1] "Seine Befugnisse sind durch die bestehenden detaillierten Vorschriften und durch das weitgehende Aufsichtsrecht der vorgeordneten Behorden ziemlich beschrankt."

Sachische Fortbildungsschulverein and the *Sachische Lehrerverein* have both come out for the union of the two types of control. After giving the usual arguments for union, the paragraph closes by stating: "The unification of the two types of schools will prove a blessing for all concerned."[1] Then the article continues to give examples where the union has recently been carried through in such cities as Chemnitz, Plauen, Annaberg, and Zittau. The article closes by stating: "Therefore, the way to remove the dual control has been pointed out and entered upon."[2]

Some months ago Hugo Steinert, editor of *Die Fortbildungsschule*, wrote a letter to the author, in which he stated: "There reigns an unfortunate dualism in Saxony." In some cases, I am informed, there has resulted a duplication of courses because of the rivalry and jealousy that has arisen between the two types.

Württemberg

In Württemberg, the Ministry of Schools and Churches has control of all the schools. The next highest authority which controls the commercial and industrial schools is a board called the *Gewerbeoberschulrat*. This board is composed of a

[1] "Eine Verschmelzung beider Schularten kann allen Beteiligten nur zum Segen gereichen."

[2] "Also der Weg zur Beseitigung des Dualismus ist gezeigt und beschritten."

member of the Department of Commerce and Industry and other members appointed by the King. The law required this board to look after the higher supervision, as may be directed by the Ministry of Schools and Churches. The next in authority is the *Beirat*, which is composed of eighteen members appointed by the Ministry of Schools and Churches. This board is composed of certain officials of the district, directors and officers of higher trade schools, higher commercial schools, public schools, art schools, and representatives of various trades. Below this, each school has an advisory board.

Bavaria

The law of 1913 provides for two types of continuation schools, one for the country, the other for the city.

The country type is organized in connection with the elementary schools, and is controlled by the same authorities.

The city type has two divisions,—the district continuation school and the trade school. The former is placed under the supervision of a district school board, composed of a member of the city council, three citizens of the district, and the head master of the school. It is the business of this board to keep watch on the regularity of attendance, and to seek to establish cordial relations between the school and the employers of labor.

The latter is placed in charge of a director. "To most trade schools is attached an association of employers, who bear the expense of school material, take part in the discussions on the plan of instruction, have the right of proposing technical teachers, assist in the supervision of the practical subjects, coöperate in the examination of apprentices, and help to spread interest in the school and to further its prosperous development. This intimate connection of an employers' association with the aims and tasks of a trade continuation school established by public money has in many cases proved an exceedingly useful arrangement. The interest of the employers in the education of the apprentices is considerably increased. And when this is achieved, the association naturally does not content itself with furthering the education of the apprentices in the school alone, but seeks to raise the standard of their calling in their own workshops as well. This is of course a process that takes place very gradually."[1] Both the district continuation school board and the trade school director are under the control of a continuation school commission.

In Munich, this commission is composed of the following members: the mayor, the city school councillor, the city trade school inspector, two magistrates, three citizens, two trade school directors, a director of a commercial continuation

[1] *Lectures on Vocational Training*, by Dr. Georg Kerschensteiner. Published by the Commercial Club of Chicago, 1911.

school, the head master of a trade school, the head master of a district continuation school, a Catholic school inspector, a Protestant school inspector, a member of the Chamber of Commerce, and two members of the Chamber of Trades. This commission prepares an annual report and recommends the budget, the appointment of teachers, and the courses of study. All its proceedings must conform to the general regulations laid down by the Minister of Schools and Churches.

Changes in the school organization, especially those affecting the curriculum, the appointment of new directors and teachers, require the sanction of the Department of the Interior, which is a branch of the Department of the Ministry of Schools and Churches.

Mistakes of the "Dual-Control" Advocates

The dual-control advocates in this country have failed to take cognizance of the fact that the industrial and commercial schools of Prussia were taken from the Ministry of Education and put under the Ministry of the Interior, because of the intense religious controversy which exists in Germany. Since that controversy is absent here the same justification for separation does not exist. The dual-control advocates have made a still greater mistake in substituting local control here in the United States, for state control which we find in Prussia.

One of the four types of vocational schools of Baden was taken from the Ministry of Education and put under the Ministry of Interior in order that it might be controlled by the same authority which controls the higher technical schools. There is no warrant for dual local control in this action.

The power of the local boards of the Southern German States has been greatly exaggerated. "Our friends" have substituted "independent schools, supported by special taxes, carried on usually in special buildings, administered by special boards of practical men and women" for the boards of advisory power which we find in Württemberg and Bavaria.

"The Practical Boards"

One of the favorite arguments presented by those who favor a two-board system of control is based on the accusation that the average schoolman is somewhat conservative and is not fully alive to the present-day needs of the community. This is supposed to be a valid argument for the inauguration of a second board, independent of the school boards that we have now. Dr. Cooley says he found that this same attitude of disparagement obtained in Germany. He states that "the guilds and the practical men in Prussia" are dissatisfied with the conduct of the industrial schools, and for that reason the schools were taken from the Ministry of Schools and Churches and put under

the Ministry of Commerce and Industry. He states further that "great care is taken to keep the schoolmaster from exercising an undue influence in the make-up of the commissions and boards which control the industrial schools." Now I am willing to admit that there is still a notion prevalent, in many quarters of the United States, which attempts to deride the American school teacher, but I deny that any such opinion worthy of any consideration exists in Germany. Some of these people who are anxious to get dual control for our schools have tried to extend and strengthen this feeling of disparagement of our American school teachers by claiming to have found that the same disparagement of the school exists in Germany. In other words, they try to make a generalization to the effect that the schoolman, wherever you find him, is not practical, but somewhat visionary, not to be taken seriously, and that this is true no matter whether the schoolman be from the United States, Germany, or elsewhere. Hence, the conclusion is clear that, in order to have these industrial schools under excellent management, it is necessary to divorce them as far as possible from the influences that are now controlling our public schools. I maintain that that is just an American idea that some of our good friends are trying to foist upon Germany to strengthen the argument in its application to this country.

On the contrary, the German schoolman is the

most influential person in his community. He is recognized everywhere as a thorough scholar. He has had, after leaving the public schools, six years' training in a state normal school, and besides that he has had a year of practice teaching. His standard of scholarship is more than an equivalent of sophomore rank in our best American colleges. The German teacher, on the average, has had four or five years more training than the American teacher. The expenses of his education for the most part, have been paid by the State. Even before he was admitted to the seminar he had to be recommended by the teacher as being one of the best pupils in the school. He had to pass a physical examination, which is exceptionally severe. In other words, even at the age of fourteen, he had to give evidence of being very exceptional both in physique and scholarship. This examination in itself, would go far to indicate that the German school teacher had been selected with reference to traits that would insure the securing of respect of the community where he might be engaged. In addition to this, the German school teacher serves two years in the army. During this period of service he receives extraordinary recognition from the army officers. Since a large proportion of the male population of Germany serves in the army, the habit of showing some extra deference to the school teacher is acquired under the influence of the recognition accorded school teachers by the officers of the army.

Another reason why the school teacher is a man of great prominence in the community is because he holds his position for life. There is no local board to put him out of office. He receives a pension from the State after his days of service are over. His wife and children are pensioned by the State. The fact of his economic independence is, then, one of the reasons that makes him a respected man in every community. In addition to this the school teacher in the country districts is usually the secretary and treasurer of the land-banks, and when people want to borrow money, they go to the school teacher. Now, on the basis of what the reader knows of things in this country, he will realize that the man who has the power to loan money is not considered a second-rate character in the community. Furthermore, it frequently happens when some dispute arises in the community that the contending parties, instead of going to trial, argue their case before the schoolmaster; and although he has no legal authority, yet his judgment in the matter is accepted. In the light of all these facts, it must be evident that the advocates of the dual-control board in this country, have "missed their guess" entirely when they thought to substantiate a two-board school system because the German school teacher was not regarded as an individual of influence in his community.

Suppose, for the sake of argument, we grant that the American schoolman is conservative,

and not prepared to carry out the new industrial school program, and that the lives of our boys and girls are more or less wasted by being under a corps of teachers who are not fully efficient, it still does not prove that a two-board school system will remedy our difficulties.

If you will read the Prussian reports of the Prussian Minister of Trade and Commerce for the last twenty-five years, you will be surprised by the number of times that he refers to the fact that experience has taught that the efficiency of the industrial schools depends upon the work and discipline in the elementary schools. He calls attention to many changes that had to be made in the elementary school, before the time and money spent on the industrial schools really became effective.

Also Dr. Kerschensteiner, of Munich, frequently mentions in his reports that in the different stages of developing the industrial schools, it was found necessary to improve the elementary schools. Is it not clear that he would have been greatly handicapped if he had not had the elementary schools under his charge?

In the summer of 1909, I took a course in Berlin under Dr. Kuehne of the *Landesgewerbeamt.* In his lectures, he called attention to the fact many times that advancement and further efficiency in the industrial schools would depend largely upon the coöperation of the elementary schools. In fact, German opinion is pretty well divided on

the question as to whether the elementary or the industrial schools have had the most to do with the present industrial efficiency of the Empire.

Now our friends in this country seem to think that if a separate school board, composed of practical men, can secure control of the boys and girls after they leave the public schools, then our vocational education problem would in large part be solved. You see from the facts that I have cited that German experience proves no such thing.

If our public schools are not what they ought to be, then they must be improved and efficiently managed, just as are the industrial schools. That being true, then the second school board, composed of so-called practical men, could not give us efficient workmen, because their control over the life of the child does not extend over a sufficiently long period of time. German experience does teach that. In order to do its work well and effectually, this second school board needs to have the child under its control not from the age of fourteen, but from the age of six. German experience does teach that. This, however, proves our contention, that we need one school board.

The advocates of the dual-control plan have taken it for granted that the American employers and labor leaders are quite as competent to give counsel as are the German employers and labor-union men. The Germans have gone through these schools. They are in a position to know what they are talking about. German labor unions

have been unanimous in their support of industrial education for the last three decades.

The American labor unions are just through fighting the establishment of industrial schools. Now, since the schools are advancing in spite of the efforts rather than because of the assistance of the labor unions, some people are already prepared to turn the management over to them.

Have our employers of capital and laboring men shown exceptionally high ability in managing interests common to both? I think not. Perhaps no country in the world shows a worse situation than does the United States with reference to strikes, boycotts, and other labor disturbances. For the last several years, the troops have been stationed almost continually in one or more fields of industry in order to preserve a reasonable peace. The problem of educating our boys and girls is a much larger and more complicated one than is the settling of labor disputes. After our "practical men" show that they can manage an easier problem (namely the labor question), then we shall be ready to consider reasons why they deserve special consideration in the control of our industrial schools.

The efficiency of our industrial schools depends quite as much on culture, morals, and discipline as it does upon mechanical skill, and for these reasons all classes of society should be represented in the forces that influence and control them.

XX

ECONOMIC IMPORTANCE

SO far it has not been possible to fix with any degree of exactness the economic value of industrial and commercial education in a highly civilized State, because there are so many cultural forces at work, and each plays an intricate part in making the state capable of competition with the rest of the world.

The author will relate a recent experience to show how difficult it is to calculate the value of industrial education in a modern state. In the summer of 1909, he met in Mostar, Herzegovina, a school committee that had been sent there by the Austrian Government to report on the effect of the industrial school and on the social and economic conditions of that region. He inquired what they thought could be learned from a school that was far from being equal to those Austria already had, and especially from one located amidst such Oriental conditions. The answer was this: Here was an exceptional chance to study the effect of a modern industrial school, which had been in operation for ten years, in a city and

country which was very primitive in culture. Hence, this school could be regarded as a single influence in its operations on society, and the results could be traced so much more easily to their causes.

One would naturally think that if the economic value could be measured anywhere, it would be in Germany, for where could one find a nation that keeps better records and fuller statistics in every branch of industry and commerce, in the various departments of her schools? Yet, as we shall see from the various viewpoints presented both by the Germans themselves and by foreigners who have attempted to analyze the problem, this question will need a long period of careful observation by future educators, economists, and historians.

That commercial and industrial schools play a great rôle in keeping up the trades and the industries of a State, and do much toward strengthening a nation in competing with the rest of the world, no one doubts; but it is their relative value regarding which the discussion arises.

Concerning the commercial schools, Dr. Franz Zimmerman says in his book, *Handelsschulen*, that great results have been accomplished in the commercial world in the last decade through the thoroughness of the school system. German merchants seem to be playing a great rôle in Brussels. Baron de Haulleville says in the *Brussels Journal:*

Also in England a large part of the foreign trade is in the hands of the Germans under English firms; so also, English trade, at the Cape, in Bombay, in the Straits-Settlements, in Hongkong, in Shanghai, Japan, Australia, South America, and Tasmania is managed by the Germans. Trade in Amsterdam, Rotterdam, and Antwerp is powerfully influenced by German houses. Hamburg is becoming one of the most important harbors in the world. German industry is conquering the English industry everywhere.

Foreigners view with jealousy the success of German industry and commerce, and are ever busy trying to learn the reasons therefor, in order successfully to direct the economic struggle against Germany.

A proof of this is the expression given below:

James Graham, Inspector for Commercial Subjects to the West Riding County Council, when asked whether he considered that Germany's outlay in commercial education was bearing fruit, answered: "Most decidedly. You have only to take up the various trade reports to see that. British retrogression in one part or another of the world is due to the fact that the foreign manufacturers, the merchants and their agents, possess a training that enables them to adapt their methods to the necessities, financial or otherwise, of the countries they desire to trade with."[1] The com-

[1] The power of the German to adapt his goods to the foreign countries, and the winning of the markets from England, are cited also by Sombart, *Die Volkswirtschraft im 19. Jahrhundert*, p. 129.

petition is increasing and the danger is growing. A few years ago England's exports exceeded those of Germany by 90,000,000 pounds; last year (1898) the excess was only 50,000,000 pounds.[1]

In order to show the development in commerce of England, Germany, and the United States, we may notice the table below, which shows the imports and exports in millions of Marks.[2]

	1890	1906	1907
Great Britain	15,300.9	21,798.7	23,747.2
Germany	8,195.2	15,554.8	17,006.7
United States of America	6,918.0	12,475.8	13,942.2

Sir Henry Wood calls attention to the fact that the merchants in London and other great centers of industry were struck by the fact that so many young Germans have been willing to come over and accept lower wages than would be paid to much inferior English clerks. But after having acquired all necessary knowledge about the language and the wants of the foreign country, they were quite ready either to go back to their own country, or, if they remained in England, to set up as rivals of their employers. The advent, however, called attention to the fact that the German clerks were far better educated for commercial purposes than young men of similar class in England.[3]

[1] *Zeitschrift für das gesamte kaufmännische Unterrichtswesen*, September, 1899, p. 139.

[2] *Bergische Volkszeitung*, Aug. 12, 1908.

[3] *Zeitschrift für das gesamte kaufmannische Unterrichtswesen*, July, 1899, p. 99.

Official opinion as to the relationship between the economic development of Germany and her trade schools, may be seen from the following sentences:

Germany has been preparing for generations for the present great growth in its manufactures and commerce, and has been laying a broad educational basis for industrial progress. This education has been commercial as well as technical.

Inquiries made in all directions of manufacturers, merchants, dealers, agents, exporters, and importers elicited, with few dissentient voices, an almost unanimous expression of opinion as to the great benefits conferred upon German trade by the provision of thorough practical and theoretical instruction for all classes of persons engaged in commercial callings.[1]

As to the importance of the industrial schools, Prof. von Schmoller says, "the industrial schools must raise the standard of life, the moral character, knowledge and efficiency of the lower classes . . ."

Also, the continued existence of medium and small business concerns alongside of the large establishments and a better scale of wages for the personnel in the wholesale establishments are dependent upon a better industrial and technical training.[2]

[1] "Industrial Education and Industrial Conditions in Germany," *Special Consular Reports*, vol. xxxiii., Department of Commerce and Labor, pp. 296 and 301.

[2] Schmoller, *Das untere und mittlere gewerbliche Schulwesen in Preussen*, 1881.

With reference to the point just mentioned, the above quoted Consular Reports (vol. xxxiii.) state:

The importance of the textile schools to the country cannot be overestimated. They are the main pillar by virtue of which the German textile industry maintains its competitive power in the foreign market. Cheapness of labor is not sufficient to attain this end. Cheap hands must be taught, and taught well, or their work will in the end cost more than that of more expensive hands which possess high skill and a thorough understanding of the trade. This demand the German schools are meeting every year. The German textile industry is probably more largely than any other industry dependent upon foreign markets. This industry is one of her greatest, and represents one of the most important incomes of her people.

She maintains these schools in order to maintain the supremacy of German textiles.

The report further refers to the textile schools as the "iron clads" of German commerce, and the most powerful weapons of German industry.[1]

Concerning knitting schools, we read:

German knit goods to the value of many millions of dollars are exported annually not only to the United States, but to European countries and to the Far East. This great competitive ability of German knit goods is due to three causes: (1) cheapness of labor;

[1] "Industrial Education and Industrial Conditions in Germany," *Special Consular Reports*, vol. xxxiii., 1905, p. 45.

(2) perfection of machinery; (3) skill of the laborers, or, in other words, the thoroughness of the educational facilities provided for the instruction of young men in the knitting trade.[1]

The German "thoroughness" in the schools makes the acquiring of the language of the country with which the German deals comparatively easy. The advantages of being able to do business in the language of the purchasing country is often cited to the credit of the German. We quote just a few references on this point.

Sir E. C. P. Hull, a member of the The Technical Education Committee, writes to the *Times* that the great advantage the German traders have over the English is the ability of the former to use foreign languages. He states that during his visit to the Canary Islands he noted that in nearly every small village the people were supplied with German goods, doubtless through the indefatigable personal efforts of German travelers, everyone of whom, no doubt, was well acquainted with the Spanish language, and probably the same experience would be afforded nearly everywhere else abroad.

English manufacturers and shippers found difficulty in adapting their goods to the tastes of their intended customers abroad, and the writer believed that this was due largely to their inability to find competent representatives familiar with the lan-

[1] *Special Consular Reports*, vol. xxxiii., 1905, p. 57.

guages of the countries selected as desirable foreign markets.[1]

Special notice should be directed to the great attention devoted to foreign languages, especially to English. As a result, a large number of German merchants are able to draw up their own catalogues and circulars in English, without extraneous aid, and so contribute to the export of German goods.[2]

One finds well-informed Germans who maintain that Germany owes her high industrial power to the training that so large a percentage of her population derives through the compulsory military service. It is argued that, by this means, the young men learn neatness, acquire a stronger physique, are trained in punctuality, obedience, respect for their superiors, etc., and that all these traits have a powerful influence when the young soldier is enrolled in the industrial army. It must be granted that this contention has some validity. However, it is not hard to see certain disadvantages which the army experience so often brings to the young man, but that brings us to a discussion that is perhaps too far removed from our subject.[3]

[1] *Zeitschrift für das gesamte kaufmännische Unterrichtswesen*, Nov., 1898.

[2] "Industrial Education and Industrial Conditions in Germany." *Special Consular Reports*, vol. xxxiii., by Dept. of Commerce and Labor, p. 301.

[3] Powell, English Consul, *Zeitschrift für das gesamte kaufmannische Unterrichtswesen*, Feb., 1899, p. 358.

Contrary to all the views expressed so far in this chapter, one finds those who maintain that it is the efficiency of the public schools rather than the trade school that has helped Germany to become such a great industrial nation, and, furthermore, that the trade and commercial schools are the result of trade expansion, and not the cause of it.[1]

Others claim that it was neither the schools that made the trade, nor the trade that made the schools, but that both are the product of racial evolution. It is argued that in the course of history races rise and fall, and that the Germans were divided and oppressed throughout the Middle Ages, and before the Napoleonic Era, but that in the last one hundred years the pent-up forces which have been collecting for centuries are just expanding themselves, and more especially since the establishment of the Empire. It is contended that, in the course of time, the German racial force will have expended itself; then the Slav will be likely to come next in order and assume rule and leadership. While traveling through the Balkan States, I found a vast number endorsing this view.

After summing up all the probable causes of Germany's great industrial expansion, one comes

[1] That Germany's forty years of peace preceding the great war were due to her powerful army is undoubtedly true, and establishes a further connection between the German army and the economic prosperity of the Empire.

to the conclusion that it was not this thing nor that, nor any one of a dozen things, but that the combined influences of racial temperament,—such as economy, hard work, integrity, etc.,—an harmonious sentiment and action on the part of the Government, manufacturers, and labor organizations, have played a great rôle in making Germany industrially great. The schools are the cause and also the result of these same influences. They are mutually dependent upon each other.

When we try to estimate the influence that American commercial and industrial schools have had on the American industrial development, we have quite a different set of facts to reckon with from those we found in Germany. As far as individual students are concerned, we have seen repeatedly that an industrial and commercial education paid enormously. (See pages 357–363.)

The economic importance of the American schools seems to be fully attested by the reports from the several schools.

The annual report for 1911 of the Hebrew Technical School for Girls (see page 193) says:

On November 1st last, we had records from 1,515 of our former pupils. They were earning in the aggregate $829,270 annually—an average of $45.64 per month. When you consider that these girls graduate from the school, when very many of them are not much over sixteen years of age, and that the greater number of the graduates are only a few years out of

the school, and begin with $6.00 or $7.00 per week, and we find that the average wage is $12.00 a week, these statistics are the best evidence of the material and real success of the school. We know that if it had not been for this supplementary training and the education in some trade or profession, these girls would be working probably for $4.00 or $5.00 a week, and some would be receiving less, at employments which did not admit of so much chance for advancement and which are not as healthful nor have such good surroundings.

The 1912–13 catalogue of the Manhattan Trade School for Girls throws light upon the success of its graduates. Pertinent citations follow:

"FOLLOW-UP WORK"

The task of "following-up" trade school girls is difficult, especially as they live in such diverse sections of the city. It would, of course, be of great value to keep records of all girls, whether they complete the course or not, since helpful and interesting comparisons as to their wages, and opportunities for employment could then be made. With the present corps of teachers, however, this is impossible, and it is all that the school can do to follow up its graduates, now numbering over eleven hundred.

It does try, however, to keep a record of the first position and wage taken by girls who drop out of school without completing their training, and even those comparisons are interesting and enlightening. They show:

(*a*) Trade school graduates working at the skilled

trades for which they have been trained, with 82 per cent. of them beginning with a weekly wage of $5 and above. Some as high as $7 and $9.

(*b*) Girls who drop out of school without completing the course working at unskilled jobs,[1] with 81 per cent. of them beginning with less than $5, the average being but $3.75, and some receiving as low as $1.

Advancement of Graduates

Girls who graduate readily keep in touch with the school, and while a certain number drift away from the school's influence and are lost sight of, it is possible to watch the advancement of a fair percentage of them for several years. After three years at trade the records of graduates show:

(*a*) 69 per cent. of girls from the dressmaking course receiving $9 per week or above. Some earning as high as $20.

(*b*) 87 per cent. of girls from the operating courses receiving $9 or above. Some earning as high as $30.

(*c*) 74 per cent. of girls from the millinery course receiving $9 or above. Some earning as high as $18.

(*d*) 52 per cent of girls from the pasting trade receiving $9 or above. Some earning as high as $16.

[1] These jobs are, cash, and messenger service, markers, button sewers, basting pullers, candy packers, folding handkerchiefs, pasting labels, threading shuttles, stripping tobacco, running errands, and numerous others.

There are, too, numberless individual cases, which cannot be made to show in averages or percentages, but which are remarkable examples of what a right start may mean to a girl. An illustration is the case of Anna B——, who had drifted about from one unskilled job to another for nearly two years, never reaching more than $6 a week. The family, a large one, were in miserable circumstances and were being helped by the Charity Organization Society. The girl was sent to the trade school and the small wage which she was earning was paid to the family from the Student Aid Fund. Anna completed her course in operating and went to work, and in less than a year and a half was able to make, at "piece work," in the busy season, as high as $35 a week. In twenty-three weeks during the past winter she has made over $600 at straw operating, and when the busy season was over she was scarcely out of work a day before she found a position at embroidery operating, where she received a weekly wage of $9. She was changed from a discouraged, unskilled worker to an enthusiastic, skilled one, rejoicing in the fact that she needed help from no one, but was able to work not only for herself, but, as she herself said, was "the main support of her entire family."

The Baron de Hirsch Trade School catalogue for 1912 reports the following:

A recent investigation has shown that the average wages of some two hundred pupils before entrance to the school was $5.39 per week. They were engaged in the various unskilled occupations that do not require any previous training or preparation. After receiving

a five and a half months' course as a special preparation to enter trades, they earned immediately after graduation an average of $7.54 per week, or a gain of $2.15, due to their ability to enter a skilled trade.

There is a constant demand for skilled helpers as for skilled mechanics, and our graduates find little difficulty in securing immediate employment after leaving the school, at wages ranging from $5.00 to $15.00 per week, and a prospect of being able to earn journeymen's wages within a year or two.

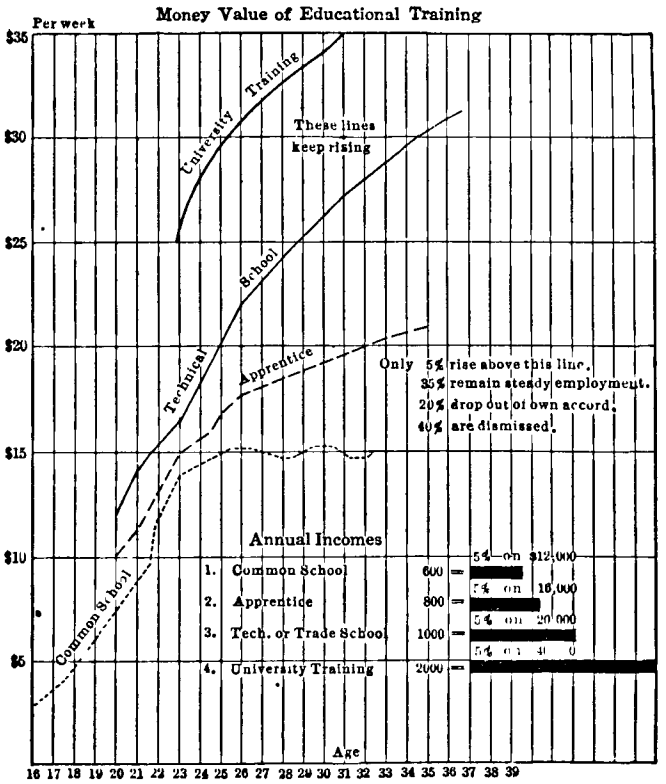
The record since 1889, of the graduates of the Hebrew Technical Institute (see p. 178) is shown in the following table:

Class	Number of Graduates	Average Weekly Earnings
1889	17	60.00
1890	16	50.00
1891	19	50.00
1892	35	50.00
1893	26	45.00
1894	31	50.00
1895	33	50.00
1896	34	50.00
1897	19	37.00
1898	30	40.00
1899	31	40.00
1900	35	36.00
1901	40	33.00
1902	34	32.00
1903	46	31.00
1904	52	27.00
1905	63	28.00
1906	59	26.00
1907	73	21.00
1908	82	21.00
1909	78	16.00
1910	88	15.00
1911	67	11.00
1912	71	8.00

According to a recent report the number following mechanical work was 728, or 74 per cent. of all the graduates. The average weekly earnings are based upon the earnings reported by 774 graduates.

However, all this is still far from proving that the United States owes its industrial position to the schools. In truth, as is the case in Germany, the industrial and commercial progress due to the schools cannot be statistically or mathematically measured. But we can see from our investigation that industrial and commercial education has played relatively a far greater rôle in developing Germany's commercial power than is the case in the United States. Let us recapitulate what we have established. The laws setting on foot industrial schools for the masses have been passed only within the last few years, and few schools are in operation as yet. The schools established by endowment, charity, and religious organization enroll a comparatively small number of the American industrial and commercial army; besides, they are too recent to have had any marked influence on the nation's industrial power.

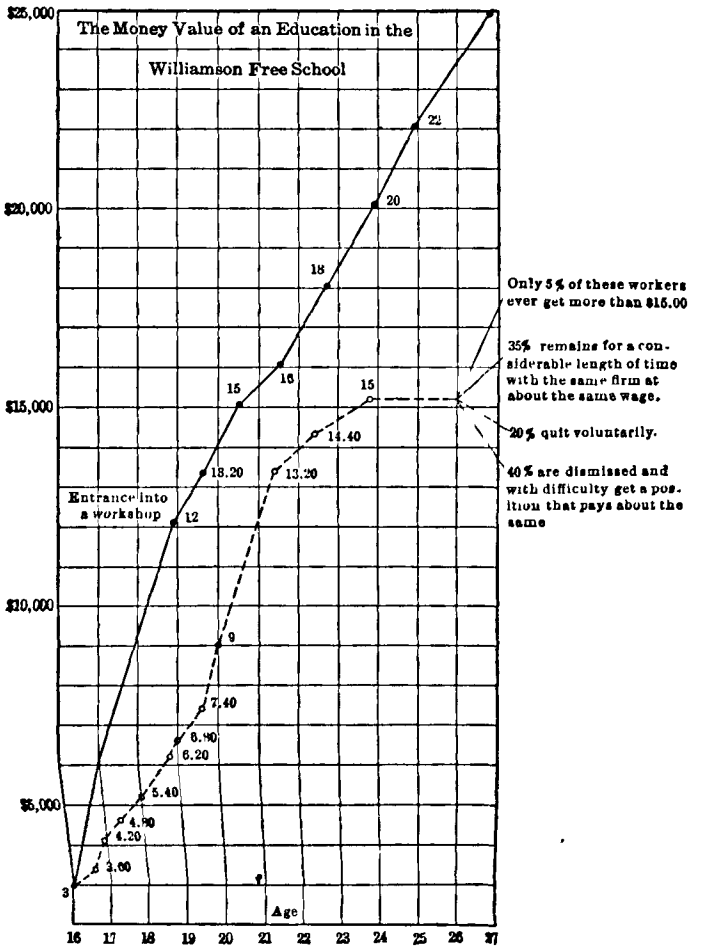
These findings on the *Money Value of Educational Training* are the result of much investigation by Mr. James Dodge when president of the Society of American Mechanical Engineers. It is worthy of careful study.



Education Department, the International Committee of Young Men's Christian Associations, 124 East 28th Street, New York.

The Money Value of an Education in the Williamson Free School (see p. 168, and table on p. 364).

The fifty-eight members who graduated in the


The Money Value of an Education in the
Williamson Free School
$25,000
$20,000
$15,000
$10,000
$5,000
3
22
20
18
15
15
15
14.40
13.20
12
9
7.40
6.40
6.20
5.40
4.80
4.20
3.60
Entrance into a workshop
Only 5% of these workers ever get more than $15.00
35% remains for a considerable length of time with the same firm at about the same wage.
20% quit voluntarily.
40% are dismissed and with difficulty get a position that pays about the same
Age
16 17 18 19 20 21 22 23 24 25 26 27

class March 29, 1913, reported on November 1, of the same year, that they were employed at the following trades:

12 as bricklayers
15 as carpenters
13 as machinists
10 as patternmakers

Their average compensation was $18.03 per week. The average wage before this year was $16.60 six months after graduation.

The lack of occupational training is further substantiated by recent investigations by the National Committee of the Young Men's Christian Association:

From official reports of various national and state educational commissions we learn that there are more than 370 different kinds of professions, occupations, trades and lines of life work represented in America. For only a small number of these occupations have definite facilities supplementing public school privileges been provided to help men and boys prepare for life work; while in some foreign nations the corresponding training facilities—commercial, industrial or technical—are many times greater than in America.

From the same source comes this information:

From the Sage Foundation reports we learn:

(1) That of one hundred boys in the first grade there are only fifty-five in the fifth grade, twenty-

seven in the eighth, six in the high school, and one to enter college.

(2) That only five per cent. of the males in the nation are fitted by definite educational training for their occupations or vocations.

These and similar striking facts show the great lack of the more adequate and fuller use of the vast wealth of American public school facilities by the boys.

The business colleges have had a much longer history, but the very fact that they preceded the industrial schools shows, in itself, that they are rather the product of our great industries and commerce than the cause of them. This last point is further substantiated by the very nature of the curriculum. (See p. 262.) The relation between the business college courses and the business world is as a rule quite indefinite.[1] The aim of the American business college is chiefly to prepare pupils to take care of business. The course is too short, generally, even to attempt much more. In Germany the course is longer, and the aim there is quite decidedly not only to enable pupils to take care of business, but considerable time is spent in the classes one way or another in discussing with pupils plans as to how business may be created.

This close relationship in Germany between

[1] Commissioner Draper, in his speech, June, 1908, before the National Educational Association, called attention to the lack of articulation between the educational and industrial systems of the country

commerce and industry on the one hand, and the schools on the other, was noted in connection with the facts that so large a percentage of the teachers come out of practical life, that the labor unions stand in such close relation to the schools, and that the employers are brought, in so many ways, into touch with the pupils and teachers. All this shows that the schools are really a part of industry or business; therefore it is only natural that they would and do have a much more direct influence on German commerce and industry than is characteristic of such institutions in the United States, where the business schools are so largely private institutions, and where labor organizations are still more or less hostile to the schools.

The way in which the German schools are supported, especially the trade schools, is another direct evidence that the schools make the industries. Ask some director of a textile school to explain to you how his school is supported. You will invariably be surprised to learn of the number of channels through which the school derives its financial support. Every group of the industrial order that is being benefited is called upon to contribute. If the various classes of manufacturers and workers were not fully convinced that the school was rendering valuable service, they would not help pay the expenses.

All this shows the actual interdependence of schools, on the one hand, and industry and commerce on the other, and for that reason it is only

natural that these institutions should have much more influence in this direction than could possibly be the case in the United States, where the business colleges are chiefly private institutions, and, where labor unions are still more or less indifferent if not in actual opposition, to trade schools.

XXI

IMPORTANCE ATTACHED TO MORALS AND HABITS AS A FACTOR IN THE INDUSTRIAL AND COMMERCIAL SCHOOL DEVELOPMENT

THERE is no doubt but that in theory most people would agree to the proposition that the higher a nation's morals, and the better its habits, the more powerful that nation is industrially and commercially. That being taken for granted, let us examine briefly what is being done to improve the morals and better the habits of the school children and young men and women in both Germany and the United States.

It is easy to show that educators and teachers in both countries are interested in these questions, but the question for us is, which country regards them of the more importance, and which spends the greater effort in having good morals and good habits inculcated into the coming generations.

In order to have Germany's position well stated we will quote from the eminent Pache, whom we have so often cited:[1]

It is a well-known fact, that children at the age of fourteen years have not yet reached their full moral

[1] Pache, *Forthildungsschulen*, book i., p. 28.

development! . . . With the awakening of adolescence, changes in disposition frequently come about, that can be conducted in right channels only through sympathetic and most watchful care. The master workman and employer very seldom take the time to concern themselves about the character development of the young helpers intrusted in their care, and even if they did attempt to give instruction, they would not be in possession of the necessary experiences in this field, which would bring about the desired influences. For this reason, it is not only desirable, but really necessary, that psychologically and pedagogically trained persons should have an opportunity to come in contact with the pupils who have completed the public schools, in order to foster a normal moral development with a definite goal in view. Hence in the interest of popular education, we need the continuation school.

Pache furthermore calls attention to the alarmingly high percentage of Germans suffering from sexual diseases. He discusses in a long and well-written chapter, the task of the continuation school in the struggle to raise the standard of morality and to diminish the use of alcohol. He writes:

It must be distinctly stated at this time that our race has been subjected to serious danger of forfeiting health and strength, and thereby becoming incapable of fulfilling the great duties imposed upon it. The situation is a fateful one, and in the interest of the future of the German people, the battle against immorality must be taken up with all decisiveness. The

continuation schools dare not withdraw from the contest. It is a matter for serious consideration whether the time has not arrived, when the physician must be called to the school to present in an unvarnished exposition the chief requisities of a moral life.

In another connection Pache says: "What strength the poison of sexual diseases has left to the people, has been taken from them by the misuse of alcohol."

In agreement with Pache, there is a demand from many quarters that the physician be brought into the continuation school, in order that the youth may be directed by professional authority in courses having to do with the conduct of life. In an article in the *Deutsche Fortbildungsschule*, Hans Hilbert, Dresden, discusses the subject in a very enlightening manner.

The author brings forward the view that the pupils accept the information of a physician more willingly and with closer attention, than the same facts given out by a regular teacher. The teacher is less qualified for this form of instruction, because he has not so completely acquired the specialized knowledge pertaining to the topic. Furthermore, they know the public school teacher so well, and many harbor the suspicion that the old school tyrant is still trying to treat them as children.

In still another connection much help is expected from the continuation school. In the session of the Prussian Parliament of January 29, 1908, the "Abgeordnete" Schiffer presented alarming state-

ments regarding criminal statistics, and possible means of correction. Amongst other things he said:

In the year 1882, there were 30,698 juvenile offenders committed under the laws of the Empire. This number reached 50,028 in the year 1904. Of this number 16.9 per cent. were guilty of the second offense. In the two decades of 1882–1901, the rate of criminality increased. Without regard to age, the rate increased is 15 per cent., but if juvenile offenders alone are considered, the rate of increase is 24 per cent. These figures show that the rate of increase for the juvenile class is out of proportion to the increase in population, and out of proportion to the increase of the criminal population itself.

These are alarming figures; but I do not believe that we can maintain that they are in any way surprising. The numbers that have been presented, correspond, no doubt, with the experiences that we have every day and hour in daily life. That our growing youth find themselves in a status of declining morals rather than in one of improvement, is not to be denied.

If we wish to combat the unfavorable conditions presented by our youth, whose criminal record can make only a one-sided impression, it will be necesary to go back to the factors out of which the moral life of our people springs. We shall have to go to the school and home; we shall have to test the relationship of school and church to the on-coming youth.

We shall have to ask ourselves the further question, if during the time between the dismissal from the school and the entrance into an occupation, a more watchful

care must be exercised, an extension of school training of some sort; for instance, a continued development of the continuation school.

Recently the author addressed a prominent German continuation school teacher regarding the value he placed upon the moral training of the continuation school. Among other statements this teacher made the following:

As concerns the social value, the continuation school has the duty to impress upon the young people a civic responsibility. The pupils in the period of their greatest physical development, in the years of formation and indecision, must have their attention directed to the ethical things of life. They must be trained to be respectable persons and true citizens.

This goal cannot be attained through special instruction in morals, but through the above-named instruction, and special child welfare organizations (boys' clubs, etc.). In this sense, there devolves the task of fostering a national spirit in our continuation schools, which is not only to be highly recommended, but has become all the more necessary, the more the demoralizing force of the Social Democratic party makes itself felt as an instrument of destruction in the relations of State and society. For this reason, the training of national loyalty finds the most powerful support in the continuation school. No doubt, every attempt to introduce religious instruction into the German continuation schools will be shattered, which is as it should be, but for the development of moral principles, every continuation school will give the widest latitude.

Views similar to those indicated above were expressed as early as 1877 by Rudolph Nagel, who outlined the goal of the industrial schools of Germany to be in part a means of "raising the status of the handicraft worker, and through thorough education, the establishing a dam against socialistic and other false doctrines, that only too easily find access into the heart of the lazy laborer."

Many other schoolmen have expressed the same opinion to the author, to the effect that the Social Democratic ideas were to be combated in the continuation school. On the other hand, one finds directors and teachers who scoff at the idea that the continuation school has as one of its moral duties, to fight against Socialism.

In the meantime, the Social Democrats are trying hard to get the boys of the continuation schools enlisted in Social Democratic Clubs. Up to August, 1907, there were between 20,000 and 30,000 pupils in Prussia alone enrolled in the Social Democratic Unions. In 1907, there were only 1300 enrolled in the unions situated in Berlin, but in August, 1909, there were 13,000.[1]

There is yet another type of directors and teachers who seem not to have thought, from any point of view whatever, about the moral side of the continuation school. In fact, when asked what the continuation school can do in the way of advancing morals, it often occurs that they in

[1] Lecture by Dr. Kuhne at the Commercial High School of Berlin in 1909.

turn will ask what is meant by morals. One sees at once that the word does not convey any definite idea to them, as it does among American teachers.

These same schoolmen explain that they feel that education and morality have no connection at all. In truth, they argue that education does not improve morals, but gives power for the exercise of a more refined immorality. Hence the moral problem is for them quite outside the whole school organization. This is a view that, in my opinion, is based on a totally false conception of education.

The women of the German schools seem to lay greater stress on the moral and ethical side of the training than do the men. The goal is ideally stated in *Theorie und Praxis der Mädchen-Fortbildungsschule* (see pp. 26, 46, and 85), by Margarete Henschke.

It is the realizing of education of the masses, the manners of the populace, and the vocational diligence of the people, that one hopes to foster in the continuation school. . . . The zeal after a higher education may estrange from the common duties of life, and in bestowing a one-sided intellectual development it is possible to give to the masses a fatal gift. Only where the advance in education is accompanied by a parallel growth in good breeding will there result a true blessing to the people. Only where the continuation school keeps in mind its ethical tasks, will the work be really profitable.

That the campaign against alcohol belongs to the list of tasks confronting the continuation school has already been mentioned at the beginning of this chapter, but there still remains the consideration of the practical measures in vogue in Germany and America for coping with this question. In Germany, the fact that alcohol is of powerful destructive character upon the economic force of the Empire seems in theory to be fairly well recognized, but in practice it is but vaguely comprehended.

From the standpoint of theory, we shall cite two views. The eminent economist, J. Conrad, states in his *Nationalökonomie* (vol. i., p. 32):

The most flagrant enemy of every achievement, which also embraces a great danger of degeneration amongst us, is alcoholism. The majority of the prison population, inmates of insane institutions and almshouses are there because of alcoholism. The most ravaging effect is wrought through the regular use of alcohol as a daily sustenance, the pursuit of which, as medical science in recent times has made clear, gradually undermines the nervous system. In Germany, it is true, drunkenness has decreased in the last century but the regular consumption has increased to a critical degree, and threatens, in a high degree, the efficiency of the people.

In the same vein, the *Landesgewerberat*, Dr. Kühne, discussed the situation in his lectures delivered before the commercial high school of Berlin. He described in detail the tremendous

consequences that alcohol consumption was having in Germany on the physical and mental powers of the laborer, and he urged the continuation school teachers to use their influence to bring about a more moderate use of it.

Despite the fact that nothing seems so easy to prove as the awful effects of alcohol on health, morals, and the industrial strength of the nation, the attitude that the schools take in combating the use of it, is astonishingly weak. The teaching along this line is based on a wrong pedagogical idea. The idea prevails to such a large extent that the teacher and older folks may be allowed to do many things that are forbidden to the youth.

To illustrate this point the author will relate a typical experience in connection with an industrial school. At a Christmas feast of an industrial continuation school, at which the school authorities and pastor were present, a most beautiful program was rendered by the boys and excellent speeches were made. In fact, the intellectual side of the whole affair was all that could be wished. But now let us examine the influences that were at work on the other side as affecting good habits, self-control, the teaching by example rather than by precept, etc. To say that I was astonished is putting it mildly! The three hundred or more boys between the ages of fourteen and seventeen were not allowed to smoke, but the school authorities and the pastor were in the same room, and smoked all the time. I inquired carefully, as to

whether the boys really observed the rule, but was assured by the school authorities that practically all of the boys smoked secretly, and were anxiously awaiting the completion of their continuation school course in order to do so openly as their elders were doing. Each boy was allowed three glasses of beer and no wine at all, but the school authorities and pastor drank several bottles of wine each, and later drank one glass of beer after another. This is not an exceptional instance, but represents the general custom throughout the Empire.

So often one will see the continuation school-boys go out on a walking tour with their teacher. No sooner are they started than the teacher lights a cigar; later in the day they will practically all drink beer, and it sometimes happens that one or more of the boys become intoxicated. In view of the great admiration which one must have both for the industrial and trade continuation schools, it is with keen regret that one makes such observations as the above. It must be added that some German teachers are total abstainers, and that the fight for reform is going on. There are many others who claim that they practice moderate drinking; but those who thoroughly understand the alcohol question, know quite well that the "drinking in moderation" theory has little weight.

The economic power of Germany could be increased much faster and easier, if the directors and teachers would set to work seriously and earnestly to help reduce Germany's drink bill,

instead of straining exclusively toward intellectual and pedagogical efficiency. Power could be gained so much easier by stopping the wasted strength than by attempting to produce a higher productive efficiency.

It is really astonishing that the school authorities who, as we have seen, are doing so much in such an admirable and strictly scientific and pedagogical way to increase the productive power of the Empire by increasing the efficiency of the future industrial workers, at the same time pay so little attention to the terrific loss which Germany's industrial efficiency suffers through alcohol.

And now what is the moral influence obtaining in the industrial and commercial schools of the United States?

We have already noted that the conviction that industrial education will reduce the amount of crime is one of the strong motives forwarding the movement. (See p. 272.) That the formation of good morals and habits is considered such a vital part of these schools, is fully indicated by the character of the speeches and lectures delivered at the conventions and before the societies that have under discussion industrial education.[1]

Right along the line of moral discussion one finds a great difference between an American and German program for a teacher's convention or

[1] Reports of the Society for the Promotion of Industrial Education.

summer institute.[1] Things which seem quite important to an American would often be deemed quite out of place by a German, who is always inclined to emphasize the economic side of things.

[1] The following questions were proposed to Professor W. S. Ashby, a former President of the Business Educators' Association. His answers to the questions set will show the general trend of thought in an American convention.

1. "Is the question of honesty discussed very much in the commercial division of the Business Educators' Association?" "Yes, a committee was appointed sometime ago to look into the conduct of fraudulent schools. And, I might also say that there are usually two or three addresses in relation to Business Ethics."

2. "In this same Association are the following discussed?

(*a*) "Is morality essential to business success?" "Yes, this subject is frequently discussed. In fact, there are one or two men on the program to handle that topic this year."

(*b*) "Is the tobacco habit discussed in any form?" "The cigarette habit is frequently discussed; however, there is not so much said about the tobacco habit."

(*c*) "Is the alcohol question or drink question discussed?" "This too, is frequently discussed."

3. "How are you impressed on the whole with the business college teachers as builders of character?" "It is my opinion that from a moral standpoint the average commercial teacher is equal, if not superior, to the literary teacher. A business man is forced to deal honorably with his fellow-citizens or go out of business."

(*a*) "Do you feel that because business colleges come into closer contact with the practical world, that for this reason they insist more on honesty, morals, etc., than other teachers or men in ordinary life?" "Yes, their environment is such that they are forced to take a decided stand on the right side of these questions. The idea and purpose of the National Commercial Teachers' Federation is for the upbuilding of the cause of commercial education in the United States. It is wielding a great influence and is to a great extent shaping the policy of the schools that are engaged in this work."

This especial moral stress is brought about to some extent by the fact that in the United States so many more women take part in the programs than is the case in Germany.

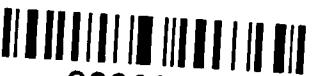
In the United States, the teachers are expected to set the example in good habits. Practically all American public school teachers are total abstainers. The same is true of the industrial and commercial teachers. In general it may be said that a teacher who would drink a glass of beer in the presence of his pupils, would be practically sure to lose his position. To be seen going in or out of a saloon would require an explanation. In a great many of the smaller colleges in America, and in a very great number of the public schools, a teacher who smokes will not be employed, no matter how capable he may be.

In our schools we have the advantage of being free from religious controversies. All parties have been able to unite much more strongly in teaching morals and inculcating good habits. In Germany, instead of giving a proper amount of attention to these requirements, valuable time is wasted in trying to instill religious dogma into the minds of the boys and girls. Instead of making them German patriots, who have full confidence in their country and countrymen, it breeds a feeling of distrust. The Germans, as a rule, do not seem to be aware of the tremendously high ideals and social standards prevailing in the United States. They are inclined to judge the whole

country by the money grabbing that is going on in politics, trust organizations, etc. And it is true that the greed for money is the worst feature of American life, and the most dangerous in its influence on the schools, as we have already shown in many ways. But in holding up to execration this fault, other national characteristics must not be overlooked.

Each nation can learn from the other. Americans, to be sure, can learn far more from Germany regarding industrial and commercial schools than the Germans can learn from us, as this whole thesis has shown. But when we consider the high social tone in America, the enterprising young men with great ambition and self-reliance, a great capacity for development, courageous and industrious in their work, we begin to realize why American commerce is so powerful. Looking at the question from this standpoint, German industrial and commercial school development could in turn learn much from America.

THE END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